



**ALMANAQUE NÁUTICO
PERSEIS
2026**

ALMANAQUE NÁUTICO PERSEIS 2026

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Imagen de portada: *El Eclipse. Eugène Atget. 17 de abril de 1912.*

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Introducción

El Almanaque Náutico Perseis es un libro de validez anual que proporciona datos, efemérides astronómicas y tablas para la reducción de observaciones en la práctica de la navegación astronómica. La información se presenta en un formato similar al del Almanaque Náutico editado por el Real Observatorio de la Armada.

Su objetivo es didáctico: proporcionar información para la resolución de problemas y ejercicios de navegación astronómica así como familiarizarse con el uso del Almanaque Náutico del R.O.A.

El Almanaque está generado usando métodos matemáticos rigurosos y datos fiables, por lo que es de esperar que ofrezca una exactitud comparable a la de los almanaques oficiales.

Esta edición del Almanaque Náutico Perseis incluye páginas diarias con las efemérides tabuladas cada hora del punto Aries, el Sol, la Luna y de los cuatro planetas visibles a simple vista y útiles para la navegación astronómica: Venus, Marte, Júpiter y Saturno; además de datos útiles para la planificación de las observaciones. Incluye tablas anuales de la posición de 99 estrellas, tabuladas para el día 15 de cada mes; la hora de paso por el meridiano de Greenwich, para el día 1 de cada mes, de 50 estrellas seleccionadas; tabla anual para el cálculo de la latitud por observación de la altura de la estrella Polar; tabla del azimut de la estrella Polar y tablas de correcciones cuyos valores dependen de la fecha. Excepcionalmente se incluye una tabla de corrección por retardo y longitud, que es invariante con el año, con el único fin de mantener la numeración de las páginas como en el Almanaque Náutico del R.O.A.

En la sección *Fenómenos relevantes* se presenta información sobre fenómenos astronómicos del año que pueden ser de interés que incluyen los eclipses del año.

Para facilitar la identificación de las estrellas de interés náutico se incluyen unos diagramas en la sección *Mapas estelares*.

Se mantiene el orden y numeración idénticos al Almanaque Náutico del R.O.A. para aquellas páginas que contienen tablas ya que a veces, en la literatura didáctica española sobre navegación astronómica, se hace referencia a la tabla de una determinada página del Almanaque. Se recomienda la adquisición, al menos una vez, del Almanaque Náutico del Real Observatorio de la Armada, que incluye más tablas que pueden aplicarse para cualquier año, una extensa explicación de su uso, otros datos interesantes, tiene un precio asequible y además es el único permitido en los exámenes oficiales.

Advertencia: *Este Almanaque se distribuye con la intención de que sea exacto y útil, pero sin ninguna garantía, por lo que no debe utilizarse en situaciones de navegación real o que pongan en riesgo vidas o bienes. Se declina cualquier responsabilidad por daños causados por el uso de este Almanaque.*

FENÓMENOS ASTRONÓMICOS RELEVANTES, 2026

Estaciones			
<i>Hemisferio N</i>	<i>Inicio (hora UT)</i>	<i>Duración (días)</i>	<i>Hemisferio S</i>
Primavera	20 de marzo a las 14 ^h 46 ^m	92.74	Otoño
Verano	21 de junio a las 08 ^h 25 ^m	93.65	Invierno
Otoño	23 de septiembre a las 00 ^h 05 ^m	89.86	Primavera
Invierno	21 de diciembre a las 20 ^h 50 ^m	88.98	Verano

Órbita terrestre		
<i>Ápside</i>	<i>Fecha (hora UT)</i>	<i>Distancia (ua)</i>
Perihelio	3 de enero a las 17 ^h 16 ^m	0.983302
Afelio	6 de julio a las 17 ^h 31 ^m	1.016644

Fases de la Luna (hora UT)			
<i>Luna Nueva</i>	<i>Cuarto Creciente</i>	<i>Luna Llena</i>	<i>Cuarto Menguante</i>
		03 ene 10:03	10 ene 15:48
18 ene 19:52	26 ene 04:47	01 feb 22:09	09 feb 12:43
17 feb 12:01	24 feb 12:28	03 mar 11:38	11 mar 09:39
19 mar 01:23	25 mar 19:18	02 abr 02:12	10 abr 04:52
17 abr 11:52	24 abr 02:32	01 may 17:23	09 may 21:10
16 may 20:01	23 may 11:11	31 may 08:45	08 jun 10:01
15 jun 02:54	21 jun 21:55	29 jun 23:57	07 jul 19:29
14 jul 09:44	21 jul 11:06	29 jul 14:36	06 ago 02:21
12 ago 17:37	20 ago 02:46	28 ago 04:19	04 sep 07:51
11 sep 03:27	18 sep 20:44	26 sep 16:49	03 oct 13:25
10 oct 15:50	18 oct 16:13	26 oct 04:12	01 nov 20:28
09 nov 07:02	17 nov 11:48	24 nov 14:54	01 dic 06:09
09 dic 00:52	17 dic 05:43	24 dic 01:28	30 dic 19:00

Eclipses

I Eclipse parcial de Sol, el martes 17 de febrero.

II Eclipse total de Luna, el martes 3 de marzo.

III Eclipse parcial de Sol, el miércoles 12 de agosto.

De este eclipse puede obtenerse información detallada en:

<https://eclipses.ign.es/eclipse-total-sol-de-12-de-agosto-2026.html>

IV Eclipse total de Luna, el viernes 28 de agosto.

FENÓMENOS ASTRONÓMICOS RELEVANTES, 2026

Inicio de las estaciones

El inicio de las estaciones astronómicas se produce cuando el Sol alcanza su altura máxima, solsticio de verano, mínima, solsticio de invierno o cuando la declinación del Sol es cero y la duración del día y la noche son iguales, equinoccios de primavera y de otoño. En la tabla de la página anterior muestra el nombre de las estaciones del hemisferio norte y del hemisferio sur. En el siglo XXI, la fecha más tardía de comienzo de las estaciones se produjo en 2003, la fecha más temprana será en 2096.

Órbita terrestre

Los puntos extremos de la órbita terrestre en función de su distancia al Sol reciben el nombre de Ápsides. El punto de mayor acercamiento anual de la Tierra al Sol se denomina perihelio y tiene lugar en los primeros días del año. El mayor acercamiento al Sol del siglo XXI fue el 5 de enero de 2020. El punto de mayor alejamiento anual es el apogeo y se produce en los primeros días de julio. El mayor alejamiento al Sol de este siglo fue el 4 de julio de 2019. Las distancias al Sol se miden en unidades astronómicas (ua). 1 ua = 149 597 870.7 km.

Fases de la Luna

Los puntos culminantes de las fases de la Luna se producen cuando la longitud eclíptica geocéntrica del Sol y la Luna forman ángulos de 0° para la luna nueva, 90° para el cuarto creciente, 180° para la luna llena y de 270° para el cuarto menguante.

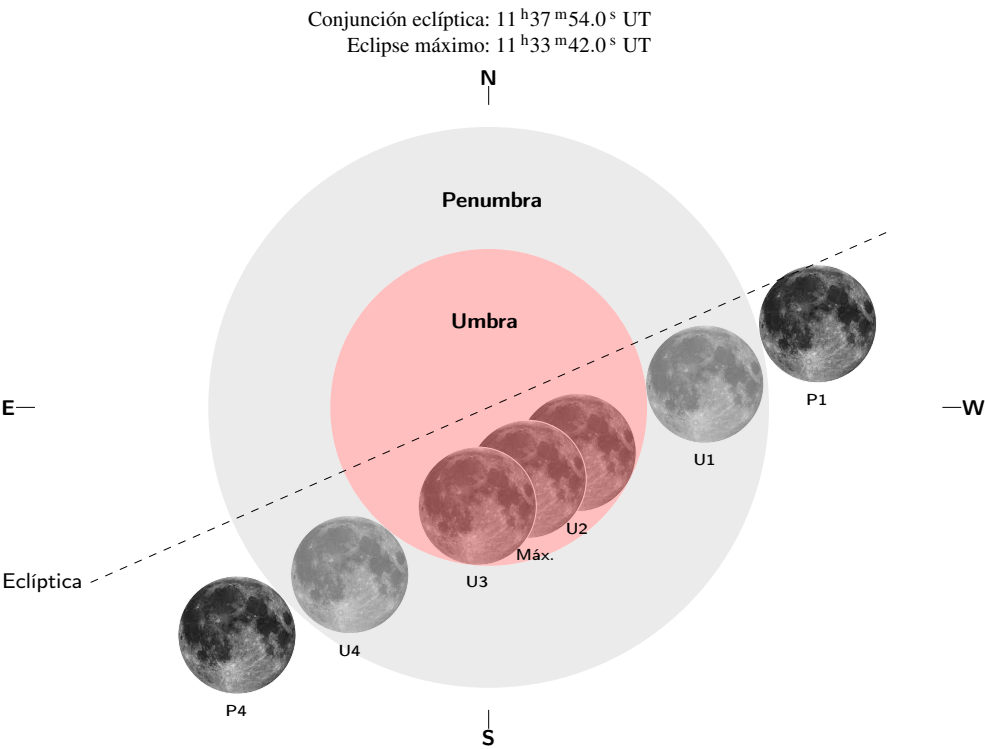
Eclipses

En astronomía, el término eclipse puede aplicarse a cualquier oscurecimiento, total o parcial, de la luz de un cuerpo celeste por otro. Pero el término está habitualmente restringido a un eclipse del Sol por la Luna (eclipse solar) o de la Luna por la Tierra (eclipse lunar), mientras que un eclipse del Sol por uno de los planetas interiores se denomina tránsito del planeta y un eclipse de una estrella o un planeta por la Luna, ocultación. En un año pueden suceder hasta siete eclipses.

Los eclipses de Sol suceden cuando, en Luna nueva, esta se interpone entre el Sol y la Tierra. Pueden ser de tres tipos principales: eclipse total, cuando la Luna tapa toda la superficie del Sol, para lo que es necesario que el diámetro aparente de la Luna sea igual o mayor que el del Sol y el observador se encuentre en la zona de sombra producida por la Luna; eclipse anular, cuando se produce la situación anterior pero el diámetro aparente de la Luna es menor que el del Sol, por lo que queda visible el borde exterior de este; eclipse parcial, cuando la Luna tapa una parte del Sol al estar la sombra de la Luna fuera de la superficie terrestre. Los eclipses totales o anulares solo es posible verlos en una franja de terreno muy estrecha aunque muy larga y durante unos pocos minutos. Hacia el norte y hacia el sur de esa franja, el eclipse se ve como parcial en una gran zona denominada zona de penumbra, fuera de esa zona no se ve.

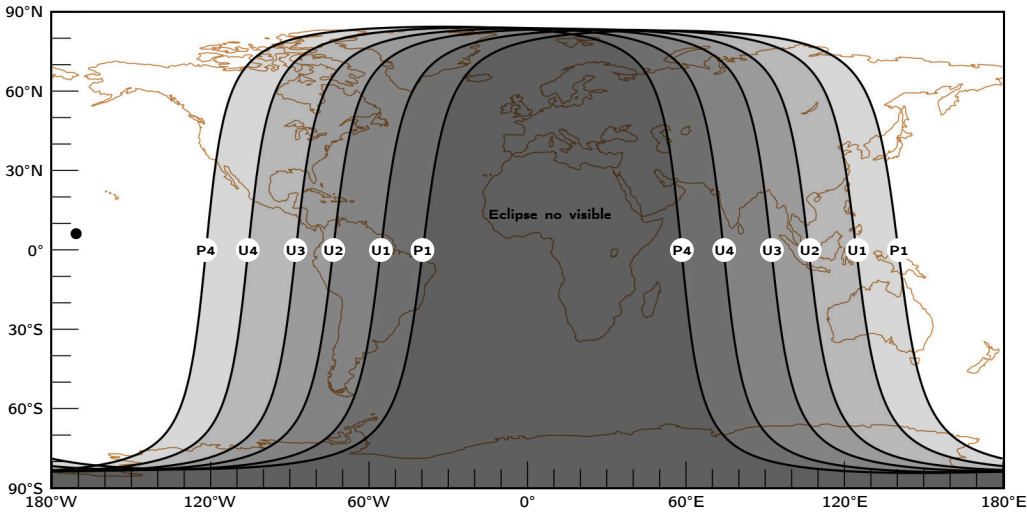
Los eclipses de Luna se producen cuando, en Luna llena, esta pasa por la sombra que produce la Tierra. Se distinguen tres tipos de eclipses de Luna: eclipse total, cuando toda la superficie de la Luna pasa por la *umbra* (sombra) de la Tierra; eclipse parcial, cuando solo una parte del disco lunar pasa por la umbra de la Tierra; eclipse penumbral, cuando la Luna penetra en la zona de penumbra creada por la Tierra, pero no llega a entrar en la umbra. La zona de penumbra es un círculo concéntrico con la umbra y de mayor tamaño que esta. Los eclipses totales de Luna son visibles desde cualquier parte de la Tierra en la que sea visible la Luna. Durante un eclipse total, la Luna adquiere un tono rojo oscuro debido a la luz que le llega difractada por la atmósfera terrestre.

Eclipse total de Luna del 3 de marzo de 2026



Duración fases	
Penumbral:	05 ^h 38.6 ^m
Parcial:	03 ^h 27.0 ^m
Total:	00 ^h 58.2 ^m

Contactos	
P1:	08 ^h 44.6 ^m UT
U1:	09 ^h 50.2 ^m UT
U2:	11 ^h 04.5 ^m UT
U3:	12 ^h 02.8 ^m UT
U4:	13 ^h 17.3 ^m UT
P4:	14 ^h 23.2 ^m UT

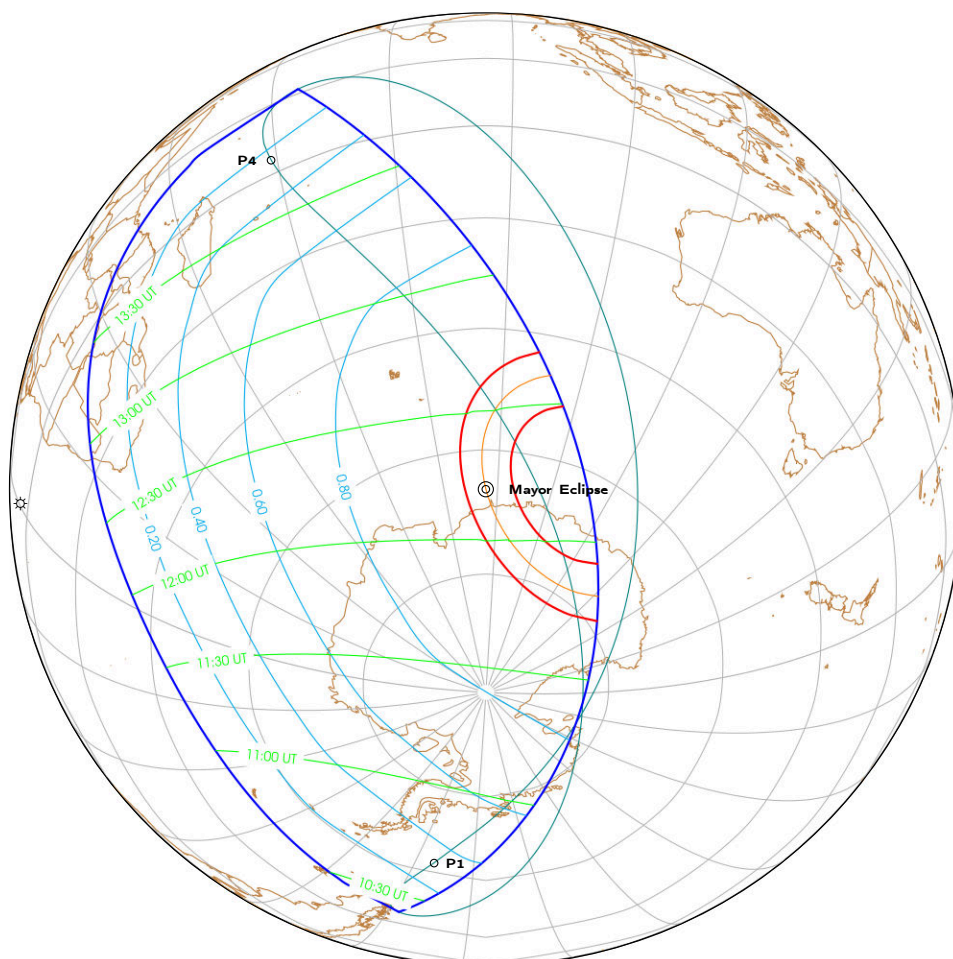


Eclipse anular de Sol del 17 de febrero de 2026

Conjunción eclíptica: 12^h01^m08.9^s UT

Mayor Eclipse: 12^h11^m56.7^s UT

Magnitud: 0.9630

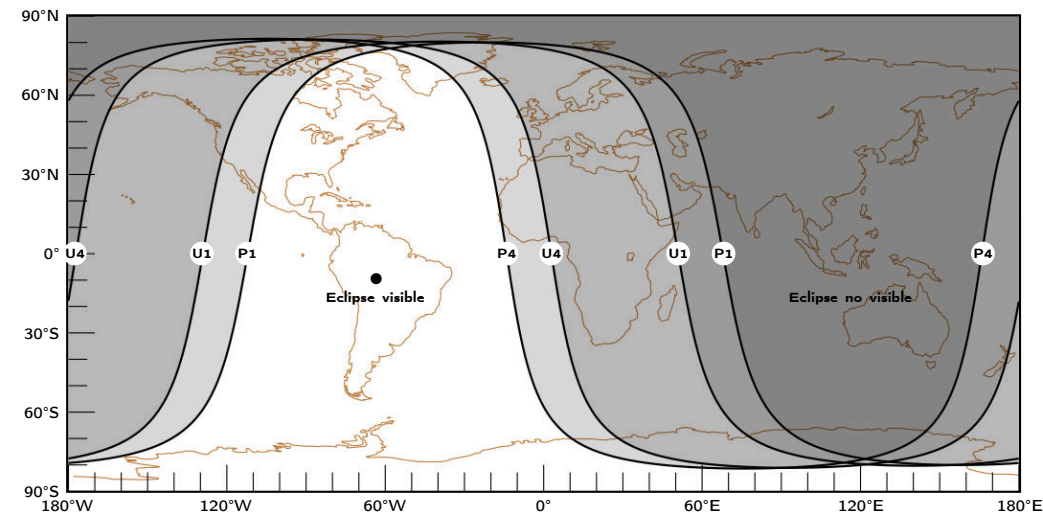
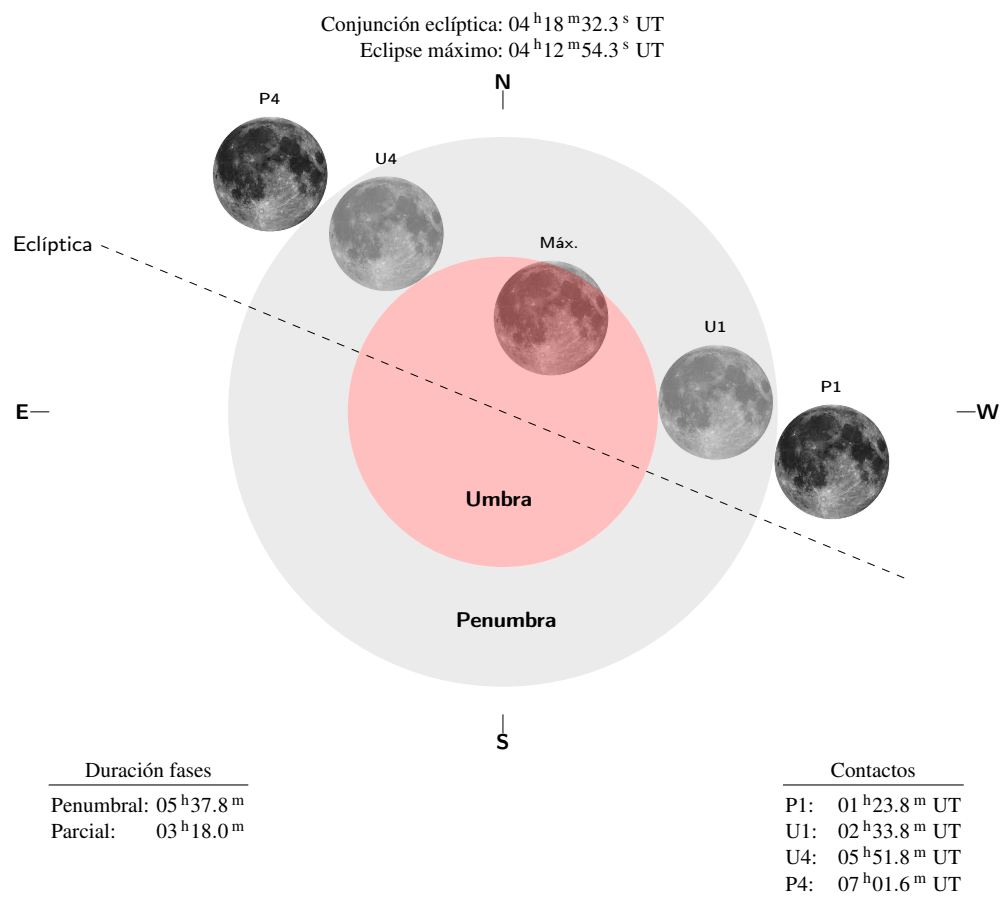


Contactos penumbra	
P1:	09 ^h 57.0 ^m UT
P4:	14 ^h 27.6 ^m UT

Mayor eclipse	
Latitud:	64° 43'0 S
Longitud:	86° 43'8 E
Anchura:	616.5 km
Duración:	02 ^m 19.7 ^s

Contactos umbra	
U1:	11 ^h 44.2 ^m UT
U2:	11 ^h 57.5 ^m UT
U3:	12 ^h 27.5 ^m UT
U4:	12 ^h 40.7 ^m UT

Eclipse parcial de Luna del 28 de agosto de 2026

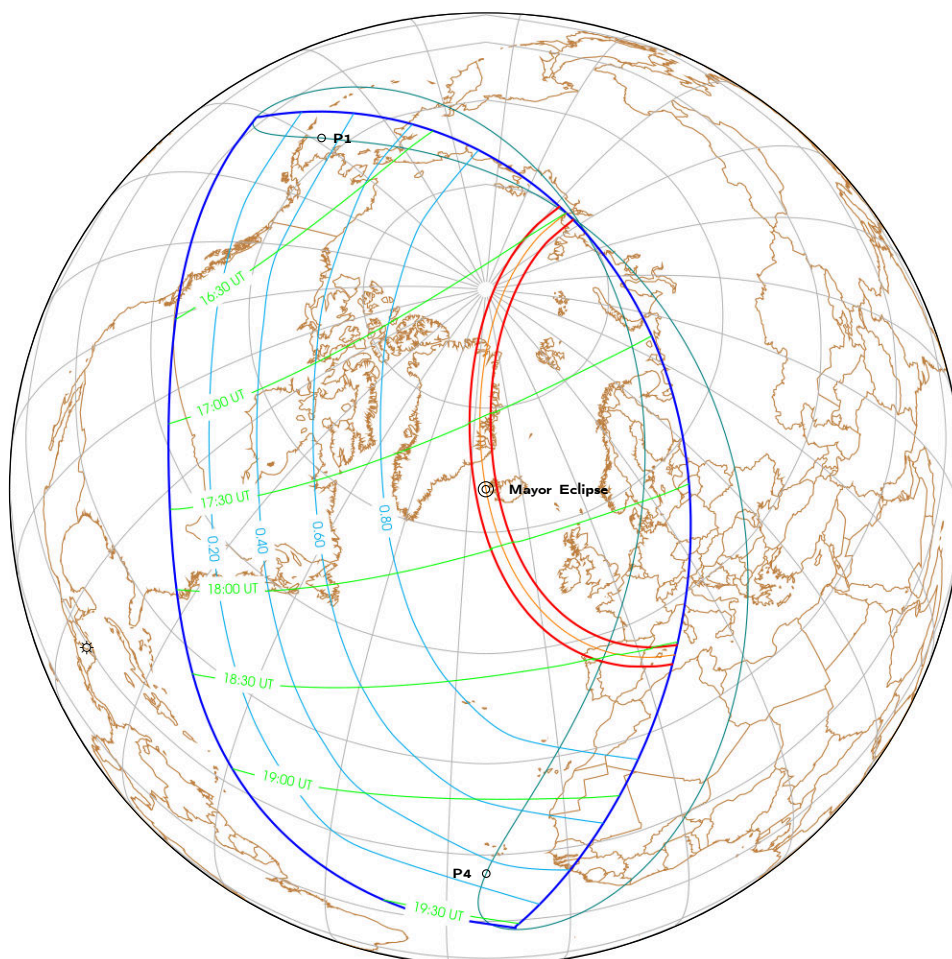


Eclipse total de Sol del 12 de agosto de 2026

Conjunción eclíptica: 17^h36^m44.9^s UT

Mayor Eclipse: 17^h45^m56.6^s UT

Magnitud: 1.0386

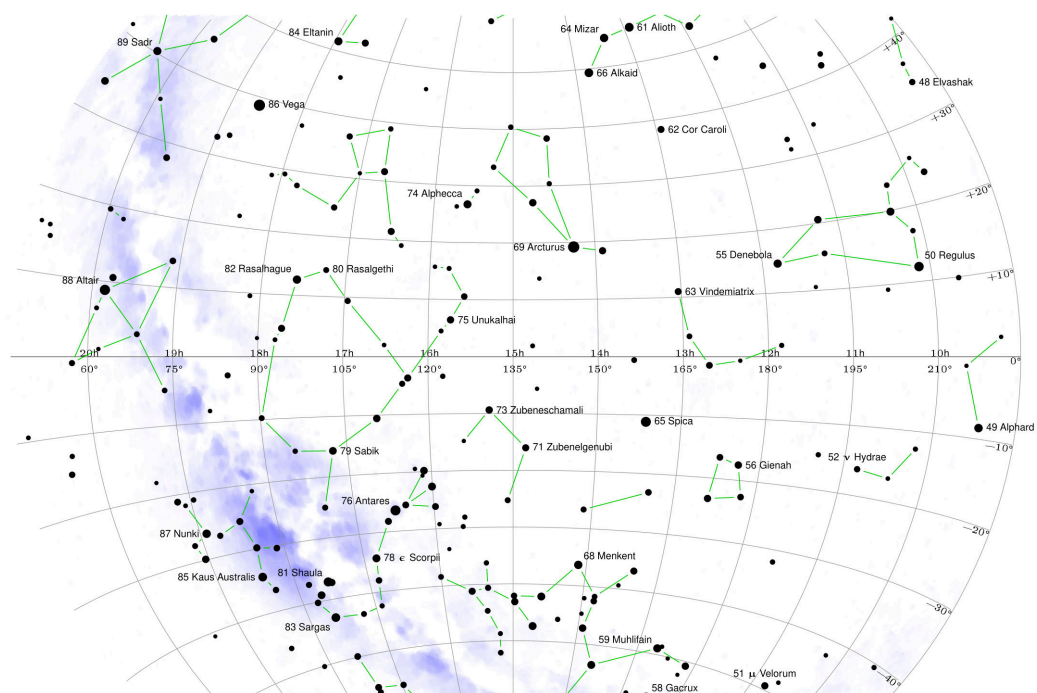
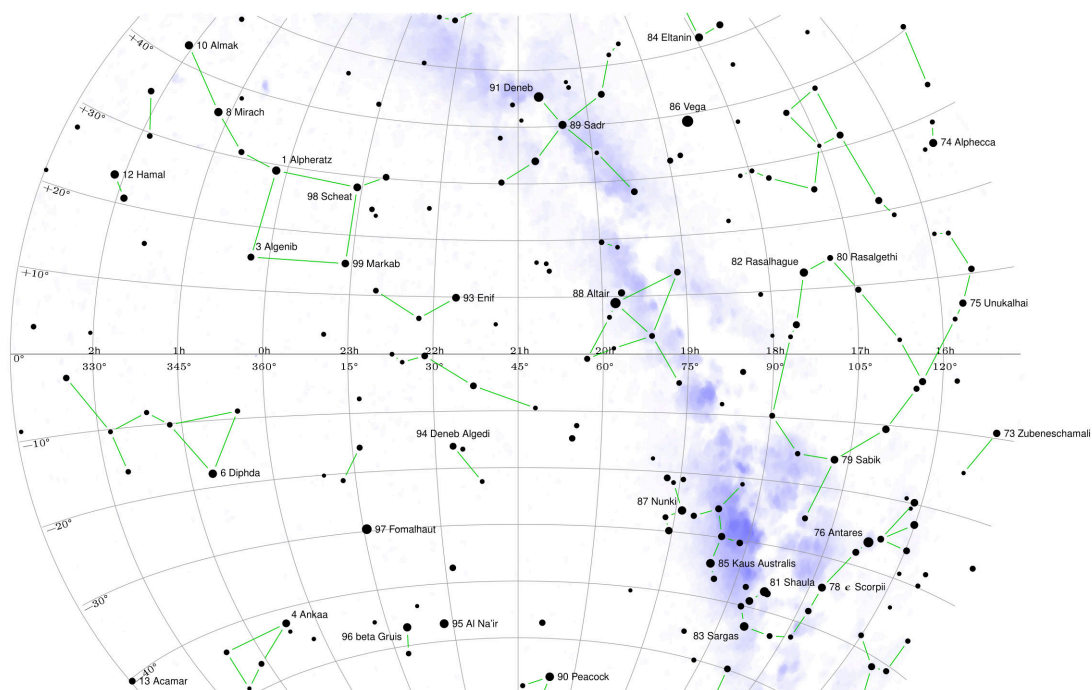


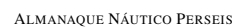
Contactos penumbra	
P1:	15 ^h 34.7 ^m UT
P4:	19 ^h 57.9 ^m UT

Mayor eclipse	
Latitud:	65° 13'4" N
Longitud:	25° 14'4" W
Anchura:	293.8 km
Duración:	02 ^m 18.1 ^s

Contactos umbra	
U1:	16 ^h 58.9 ^m UT
U2:	17 ^h 02.9 ^m UT
U3:	18 ^h 29.8 ^m UT
U4:	18 ^h 33.8 ^m UT

Mapas estelares





UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG:12 ^h 03.6 ^m			Edad: 11.9 ^d PHE { SD: 16'5 PMG: 22 ^h 32 ^m 4 ^h : 60'8 12 ^h : 60'8 20 ^h : 60'9 Rº: 67 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº		Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	10.1	-23	01.0	36	44.5	+26	24.2	60 N	7	09	8	06	9	02	11	50
1	194	09.8		00.8	51	06.0		30.9	58	7	02	7	54	8	45	12	21
2	209	09.5		00.6	65	27.3		37.4	56	6	56	44		31	12	45	57
3	224	09.2		00.4	79	48.6		43.7	54	50	35	19		13	05	60	7
4	239	08.9	-23	00.2	94	09.7		49.8	52	44	28	8	08		21	62	32
5	254	08.6	-23	00.0	108	30.8	+26	55.7	50	6	39	7	20	7	59	13	36
6	269	08.3	-22	59.8	122	51.8	+27	01.5	45	6	28	7	05	7	38	14	05
7	284	08.0		59.6	137	12.7		07.0	40	18	6	51	22		27	65	27
8	299	07.7		59.4	151	33.5		12.3	35	08	40	7	08	14	46	65	5
9	314	07.4		59.2	165	54.3		17.4	30	6	00	30	6	56	15	03	65
10	329	07.1		59.0	180	14.9		22.3	20	5	44	6	11	35	30	66	26
11	344	06.8	-22	58.8	194	35.6	+27	27.0	10 N	5	28	5	54	6	17	15	54
12	359	06.5	-22	58.6	208	56.1	+27	31.4	0	5	11	5	37	6	00	16	16
13	14	06.2		58.3	223	16.6		35.7	10 S	4	53	5	20	5	43	16	39
14	29	05.9		58.1	237	37.0		39.8	20	30	4	59	24	17	03	67	3
15	44	05.6		57.9	251	57.3		43.6	30	4	02	35	5	02	31	68	3
16	59	05.4		57.7	266	17.6		47.3	35	3	44	20	4	50	17	48	67
17	74	05.1	-22	57.5	280	37.9	+27	50.7	40	3	21	4	02	4	35	18	07
18	89	04.8	-22	57.3	294	58.1	+27	53.9	45	2	51	3	40	4	17	18	31
19	104	04.5		57.1	309	18.2		56.9	50	2	07	3	11	3	55	19	01
20	119	04.2		56.8	323	38.3	+27	59.7	52	1	41	2	57	45	16	68	0
21	134	03.9		56.6	337	58.4	+28	02.2	54	1	01	39	33	34	67	40	48
22	149	03.6		56.4	352	18.5		04.6	56	**	**	2	18	19	19	55	67
23	164	03.3		56.2	6	38.5		06.7	58	**	**	1	50	3	03	20	23
24	179	03.0	-22	56.0	20	58.4	+28	08.6	60 S	**	**	1	06	2	43	21	01

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 14.5 ^m		Mag: -3.9 PMG: 11 ^h 58 ^m		Mag: +1.1 PMG: 12 ^h 13 ^m		Mag: -2.7 PMG: 0 ^h 50 ^m		Mag: +1.0 PMG: 17 ^h 04 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	100	39.7	180	36.3	176	47.0	347	32.3	103	16.9
1	115	42.2	195	35.4	191	47.3	2	35.1	118	19.2
2	130	44.7	210	34.4	206	47.7	17	37.9	133	21.5
3	145	47.1	225	33.4	221	48.1	32	40.7	148	23.9
4	160	49.6	240	32.5	236	48.5	47	43.5	163	26.2
5	175	52.1	255	31.5	251	48.9	62	46.3	178	28.5
6	190	54.5	270	30.5	266	49.2	77	49.1	193	30.9
7	205	57.0	285	29.6	281	49.6	92	52.0	208	33.2
8	220	59.4	300	28.6	296	50.0	107	54.8	223	35.5
9	236	01.9	315	27.6	311	50.4	122	57.6	238	37.9
10	251	04.4	330	26.7	326	50.8	138	00.4	253	40.2
11	266	06.8	345	25.7	341	51.1	153	03.2	268	42.5
12	281	09.3	0	24.7	356	51.5	168	06.0	283	44.9
13	296	11.8	15	23.8	11	51.9	183	08.8	298	47.2
14	311	14.2	30	22.8	26	52.3	198	11.6	313	49.5
15	326	16.7	45	21.8	41	52.7	213	14.4	328	51.9
16	341	19.2	60	20.9	56	53.0	228	17.3	343	54.2
17	356	21.6	75	19.9	71	53.4	243	20.1	358	56.5
18	11	24.1	90	18.9	86	53.8	258	22.9	13	58.9
19	26	26.6	105	18.0	101	54.2	273	25.7	29	01.2
20	41	29.0	120	17.0	116	54.6	288	28.5	44	03.5
21	56	31.5	135	16.0	131	54.9	303	31.3	59	05.8
22	71	33.9	150	15.1	146	55.3	318	34.1	74	08.2
23	86	36.4	165	14.1	161	55.7	333	37.0	89	10.5
24	101	38.9	180	13.2	176	56.1	348	39.8	104	12.8
Dif	—		-10	+1	+4	+2	+28	+1	+23	+1

UT	SOL		LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG:12 ^h 04.0 ^m		Edad: 12.9 ^d SD: 16/6 PMG: 23 ^h 39 ^m PHE { 4 ^h : 60/8 12 ^h : 60/8 20 ^h : 60/7 R°: 66 ^m														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	03.0	-22	56.0	20	58.4	+28	08.6	60 N	15	07	16	03	16	59	12	40
1	194	02.7		55.7	35	18.4		10.3	58		23	14	17	06	13	18	
2	209	02.4		55.5	49	38.3		11.8	56		37	24	13	14	88	28	
3	224	02.2		55.3	63	58.2		13.0	54	15	50	33	19	14	05	85	
4	239	01.9		55.1	78	18.2		14.1	52	16	00	41	24	23	82	7	
5	254	01.6	-22	54.8	92	38.0	+28	14.9	50	16	10	16	48	17	29	14	
6	269	01.3	-22	54.6	106	57.9	+28	15.5	45	16	30	17	04	17	41	15	
7	284	01.0		54.4	121	17.8		15.8	40	16	46	17	17	17	51	32	
8	299	00.7		54.2	135	37.7		16.0	35	17	00	28	18	00	15	51	
9	314	00.4		53.9	149	57.6		15.9	30	12		38	08	16	08		
10	329	00.1		53.7	164	17.5		15.6	20	33		17	57	24	16	36	
11	343	59.8	-22	53.5	178	37.4	+28	15.1	10 N	17	51	18	14	18	40	17	
12	358	59.5	-22	53.3	192	57.3	+28	14.4	0	18	08	18	30	18	56	17	
13	13	59.3		53.0	207	17.3		13.4	10 S		25	18	48	19	15	17	
14	28	59.0		52.8	221	37.3		12.3	20	18	43	19	08	19	37	18	
15	43	58.7		52.6	235	57.3		10.9	30	19	05	32	20	05	39	60	
16	58	58.4		52.3	250	17.3		09.3	35	17		19	47	23	18	55	
17	73	58.1	-22	52.1	264	37.4	+28	07.4	40	19	32	20	05	20	46	19	
18	88	57.8	-22	51.9	278	57.5	+28	05.4	45	19	50	20	27	21	15	19	
19	103	57.5		51.6	293	17.6		03.1	50	20	11	20	55	21	58	20	
20	118	57.2		51.4	307	37.8	+28	00.7	52	22		21	10	22	24	24	
21	133	56.9		51.1	321	58.0	+27	58.0	54		34	27		23	02	20	
22	148	56.7		50.9	336	18.3		55.1	56	20	47	21	48	** **	21	02	
23	163	56.4		50.7	350	38.7		52.0	58	21	03	22	15	** **	21	29	
24	178	56.1	-22	50.4	4	59.1	+27	48.6	60 S	21	23	22	56	** **	22	05	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 10.6 ^m		Mag: -3.9 PMG: 12 ^h 00 ^m		Mag: +1.1 PMG: 12 ^h 12 ^m		Mag: -2.7 PMG: 0 ^h 45 ^m		Mag: +1.0 PMG: 17 ^h 01 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	101	38.9	180	13.2	-23	34.0	176	56.1	-23	39.1
1	116	41.3	195	12.2		33.8	191	56.5		38.9
2	131	43.8	210	11.2		33.7	206	56.8		38.7
3	146	46.3	225	10.3		33.5	221	57.2		38.5
4	161	48.7	240	09.3		33.3	236	57.6		38.3
5	176	51.2	255	08.3	-23	33.2	251	58.0	-23	38.2
6	191	53.7	270	07.4	-23	33.0	266	58.4	-23	38.0
7	206	56.1	285	06.4		32.8	281	58.7		37.8
8	221	58.6	300	05.4		32.7	296	59.1		37.6
9	237	01.1	315	04.5		32.5	311	59.5		37.4
10	252	03.5	330	03.5		32.3	326	59.9		37.2
11	267	06.0	345	02.5	-23	32.2	342	00.3	-23	37.1
12	282	08.4	0	01.6	-23	32.0	357	00.6	-23	36.9
13	297	10.9	15	00.6		31.8	12	01.0		36.7
14	312	13.4	29	59.7		31.7	27	01.4		36.5
15	327	15.8	44	58.7		31.5	42	01.8		36.3
16	342	18.3	59	57.7		31.3	57	02.2		36.1
17	357	20.8	74	56.8	-23	31.1	72	02.5	-23	36.0
18	12	23.2	89	55.8	-23	31.0	87	02.9	-23	35.8
19	27	25.7	104	54.8		30.8	102	03.3		35.6
20	42	28.2	119	53.9		30.6	117	03.7		35.4
21	57	30.6	134	52.9		30.4	132	04.1		35.2
22	72	33.1	149	52.0		30.2	147	04.4		35.0
23	87	35.6	164	51.0		30.1	162	04.8		34.8
24	102	38.0	179	50.0	-23	29.9	177	05.2	-23	34.6
Dif	—		-10		+2		+4		+2	
									+28	
									+1	
										+23
										+1

UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 16'3 PMG:12 ^h 04.5 ^m			Edad: 13.9 ^d PHE { 4 ^h : 60'6 12 ^h : 60'5 20 ^h : 60'3 PMG: **h **m R°: **m																							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°											
h	°	'	°	°	'	°	'	°		°	h	m	h	m	h	m	m										
0	178	56.1	-22	50.4	4	59.1	14	+27	48.6	35	60 N	7 09	8 05	9 01	14 19	116	10 12										
1	193	55.8		50.2	19	19.5	16		45.1	37	58	7 02	7 54	8 45	14 48	106	9 43										
2	208	55.5		49.9	33	40.1	16		41.4	40	56	6 55	44	31	15 10	99	20 30										
3	223	55.2		49.7	48	00.7	16		37.4	42	54	49	35	18	29	94	9 02										
4	238	54.9		49.5	62	21.3	16		33.2	43	52	44	27	8 08	44	91	8 46										
5	253	54.6	-22	49.2	76	42.1	18	+27	28.9	42	50	6 39	7 20	7 58	15 57	88	8 32										
6	268	54.4	-22	49.0	91	02.9	18	+27	24.3	46	45	6 28	7 05	7 38	16 25	82	8 04										
7	283	54.1		48.7	105	23.8	19		19.5	48	40	18	6 52	22	16	46	7 42										
8	298	53.8		48.5	119	44.8	20		14.5	50	35	09	40	7 08	17 04	75	23										
9	313	53.5		48.2	134	05.9	21		09.3	52	30	6 00	30	6 56	20	72	7 07										
10	328	53.2		48.0	148	27.0	21	+27	04.0	53	20	5 44	6 12	36	17	45	6 40										
11	343	52.9	-22	47.7	162	48.3	23	+26	58.4	56	10 N	5 29	5 55	6 18	18 08	64	6 17										
12	358	52.6	-22	47.5	177	09.6	23	+26	52.6	58	0	5 12	5 38	6 01	18 29	60	5 55										
13	13	52.4		47.2	191	31.1	25		46.6	60	10 S	4 54	21	5 44	18 49	57	33										
14	28	52.1		47.0	205	52.6	25		40.5	61	20	32	5 01	25	19 12	53	5 09										
15	43	51.8		46.7	220	14.3	27		34.1	64	30	4 03	4 37	5 04	37	49	4 42										
16	58	51.5		46.5	234	36.0	27		27.6	65	35	3 45	22	4 51	19 52	46	25										
17	73	51.2	-22	46.2	248	57.9	29	+26	20.8	68	40	3 23	4 04	4 37	20 10	42	4 06										
18	88	50.9	-22	46.0	263	19.8	29	+26	13.9	69	45	2 53	3 42	4 19	20 31	38	3 43										
19	103	50.7		45.7	277	41.9	31	+26	06.8	71	50	2 10	3 14	3 57	20 57	32	3 13										
20	118	50.4		45.5	292	04.1	32	+25	59.5	73	52	1 45	2 59	47	21 09	30	2 58										
21	133	50.1		45.2	306	26.4	33		52.1	74	54	1 06	42	35	24	26	41										
22	148	49.8		45.0	320	48.8	34		44.4	77	56	** **	2 21	21	21	41	2 20										
23	163	49.5		44.7	335	11.4	36		36.6	78	58	** **	1 54	3 06	22	01	1 54										
24	178	49.2	-22	44.4	349	34.0	36	+25	28.6	80	60 S	** **	1 12	2 46	22 26	7	1 17										
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 17 ^h 06.7 ^m			Mag: -3.9 PMG: 12 ^h 01 ^m			Mag: +1.1 PMG: 12 ^h 11 ^m			Mag: -2.7 PMG: 0 ^h 41 ^m			Mag: +1.0 PMG: 16 ^h 57 ^m														
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec												
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°												
0	102	38.0	179	50.0	-23	29.9	177	05.2	-23	34.6	349	47.3	+22	01.5	105	08.7											
1	117	40.5	194	49.1		29.7	192	05.6		34.4	4	50.1		01.5	120	11.0											
2	132	42.9	209	48.1		29.5	207	06.0		34.3	19	52.9		01.6	135	13.4											
3	147	45.4	224	47.2		29.3	222	06.3		34.1	34	55.8		01.7	150	15.7											
4	162	47.9	239	46.2		29.1	237	06.7		33.9	49	58.6		01.7	165	18.0											
5	177	50.3	254	45.2	-23	28.9	252	07.1	-23	33.7	65	01.4	+22	01.8	180	20.3											
6	192	52.8	269	44.3	-23	28.7	267	07.5	-23	33.5	80	04.2	+22	01.8	195	22.7											
7	207	55.3	284	43.3		28.5	282	07.9		33.3	95	07.0		01.9	210	25.0											
8	222	57.7	299	42.4		28.3	297	08.2		33.1	110	09.8		01.9	225	27.3											
9	238	00.2	314	41.4		28.1	312	08.6		32.9	125	12.7		02.0	240	29.6											
10	253	02.7	329	40.4		27.9	327	09.0		32.7	140	15.5		02.1	255	32.0											
11	268	05.1	344	39.5	-23	27.7	342	09.4	-23	32.5	155	18.3	+22	02.1	270	34.3											
12	283	07.6	359	38.5	-23	27.5	357	09.8	-23	32.3	170	21.1	+22	02.2	285	36.6											
13	298	10.1	14	37.6		27.3	12	10.2		32.1	185	23.9		02.2	300	38.9											
14	313	12.5	29	36.6		27.1	27	10.5		31.9	200	26.7		02.3	315	41.3											
15	328	15.0	44	35.6		26.9	42	10.9		31.7	215	29.6		02.3	330	43.6											
16	343	17.4	59	34.7		26.7	57	11.3		31.5	230	32.4		02.4	345	45.9											
17	358	19.9	74	33.7	-23	26.5	72	11.7	-23	31.4	245	35.2	+22	02.5	0	48.2											
18	13	22.4	89	32.8	-23	26.3	87	12.1	-23	31.2	260	38.0	+22	02.5	15	50.6											
19	28	24.8	104	31.8		26.1	102	12.4		31.0	275	40.8		02.6	30	52.9											
20	43	27.3	119	30.9		25.9	117	12.8		30.8	290	43.6		02.6	45	55.2											
21	58	29.8	134	29.9		25.7	132	13.2		30.6	305	46.5		02.7	60	57.5											
22	73	32.2	149	28.9		25.5	147	13.6		30.4	320	49.3		02.7	75	59.9											
23	88	34.7	164	28.0		25.3	162	14.0		30.2	335	52.1		02.8	91	02.2											
24	103	37.2	179	27.0	-23	25.0	177	14.3	-23	30.0	350	54.9	+22	02.9	106	04.5											
Dif	—			-10			+2			+4			+2			+28			+1			+23			+1		

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 04.9 ^m				Edad: 14.9 ^d SD: 16'4 PMG: 0 ^h 44 ^m PHE { 4 ^h : 60'1 12 ^h : 59'9 20 ^h : 59'7 R°: 60 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico			Hora	R°	Hora	R°		
h	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	
0	178	49.2	-22	44.4	349	34.0	+25	28.6	15 10	16 06	17 02	16 15	112	10 26	6			
1	193	49.0		44.2	3	56.8		20.5	26	17	09	34	105	10 06	13			
2	208	48.7		43.9	18	19.7		12.1	40	27	15	16	49 101	9 50	18			
3	223	48.4		43.7	32	42.7	+25	03.6	15 52	35	21	17	03 96	35	23			
4	238	48.1		43.4	47	05.9	+24	55.0	16 03	43	26	15	92	23	26			
5	253	47.8	-22	43.1	61	29.2	+24	46.1	16 12	16 50	17 31	17 25	89	9 12	29			
6	268	47.5	-22	42.9	75	52.6	+24	37.1	16 32	17 05	17 42	17 47	83	8 49	35			
7	283	47.3		42.6	90	16.1		28.0	16 48	18	17 52	18 04	78	30	39			
8	298	47.0		42.4	104	39.8		18.7	17 02	30	18 01	19	74	15	42			
9	313	46.7		42.1	119	03.6	+24	09.2	30	14	40	32	70	8	01	46		
10	328	46.4		41.8	133	27.5	+23	59.6	20	34	17 58	25	18 53	65	7	38	51	
11	343	46.1	-22	41.6	147	51.6	+23	49.8	10 N	17 52	18 15	18 41	19 12	60	7	17	55	
12	358	45.8	-22	41.3	162	15.8	+23	39.9	0	18 09	18 31	18 57	19 29	56	6	58	59	
13	13	45.6		41.0	176	40.2		29.8	10 S	26	18 49	19 15	19 46	52	39	63		
14	28	45.3		40.7	191	04.6		19.6	20	18 44	19 08	19 37	20 05	47	6	18	68	
15	43	45.0		40.5	205	29.2	+23	09.3	30	19 05	32	20 05	26	42	5	54	73	
16	58	44.7		40.2	219	54.0	+22	58.8	35	18	19 47	23	38	39	40	75		
17	73	44.4	-22	39.9	234	18.9	+22	48.2	40	19 32	20 05	20 46	20 52	35	5	23	80	
18	88	44.2	-22	39.7	248	43.9	+22	37.4	45	19 49	20 26	21 15	21 09	30	5	03	84	
19	103	43.9		39.4	263	09.1		26.5	50	20 11	20 54	21 57	29	24	4	38	90	
20	118	43.6		39.1	277	34.4		15.5	52	21	21 09	22 22	39	21	26	93		
21	133	43.3		38.8	291	59.8	+22	04.3	54	33	25	22 58	21 50	18	4	12	97	
22	148	43.0		38.6	306	25.4	+21	53.0	56	20 46	21 46	** **	22 02	14	3	55	103	
23	163	42.8		38.3	320	51.1		41.6	58	21 02	22 12	** **	16	9	36	108		
24	178	42.5	-22	38.0	335	17.0	+21	30.1	60 S	21 21	22 52	** **	22 33	3	3	11	118	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 17 ^h 02.7 ^m		Mag: -3.9 PMG: 12 ^h 03 ^m			Mag: +1.1 PMG: 12 ^h 11 ^m			Mag: -2.7 PMG: 0 ^h 36 ^m			Mag: +1.0 PMG: 16 ^h 53 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /						
0	103	37.2	179	27.0	-23	25.0	177	14.3	-23	30.0	350	54.9	+22	02.9	106	04.5	-3	30.9
1	118	39.6	194	26.1		24.8	192	14.7		29.8	5	57.7		02.9	121	06.8		30.8
2	133	42.1	209	25.1		24.6	207	15.1		29.6	21	00.5		03.0	136	09.2		30.8
3	148	44.6	224	24.2		24.4	222	15.5		29.4	36	03.4		03.0	151	11.5		30.7
4	163	47.0	239	23.2		24.2	237	15.9		29.2	51	06.2		03.1	166	13.8		30.6
5	178	49.5	254	22.3	-23	23.9	252	16.3	-23	29.0	66	09.0	+22	03.1	181	16.1	-3	30.6
6	193	51.9	269	21.3	-23	23.7	267	16.6	-23	28.7	81	11.8	+22	03.2	196	18.4	-3	30.5
7	208	54.4	284	20.3		23.5	282	17.0		28.5	96	14.6		03.3	211	20.8		30.4
8	223	56.9	299	19.4		23.3	297	17.4		28.3	111	17.4		03.3	226	23.1		30.4
9	238	59.3	314	18.4		23.0	312	17.8		28.1	126	20.3		03.4	241	25.4		30.3
10	254	01.8	329	17.5		22.8	327	18.2		27.9	141	23.1		03.4	256	27.7		30.2
11	269	04.3	344	16.5	-23	22.6	342	18.5	-23	27.7	156	25.9	+22	03.5	271	30.1	-3	30.1
12	284	06.7	359	15.6	-23	22.3	357	18.9	-23	27.5	171	28.7	+22	03.5	286	32.4	-3	30.1
13	299	09.2	14	14.6		22.1	12	19.3		27.3	186	31.5		03.6	301	34.7		30.0
14	314	11.7	29	13.7		21.9	27	19.7		27.1	201	34.4		03.6	316	37.0		29.9
15	329	14.1	44	12.7		21.6	42	20.1		26.9	216	37.2		03.7	331	39.3		29.9
16	344	16.6	59	11.8		21.4	57	20.5		26.7	231	40.0		03.8	346	41.7		29.8
17	359	19.1	74	10.8	-23	21.2	72	20.8	-23	26.5	246	42.8	+22	03.8	1	44.0	-3	29.7
18	14	21.5	89	09.8	-23	20.9	87	21.2	-23	26.3	261	45.6	+22	03.9	16	46.3	-3	29.6
19	29	24.0	104	08.9		20.7	102	21.6		26.1	276	48.4		03.9	31	48.6		29.6
20	44	26.4	119	07.9		20.5	117	22.0		25.9	291	51.3		04.0	46	50.9		29.5
21	59	28.9	134	07.0		20.2	132	22.4		25.6	306	54.1		04.0	61	53.3		29.4
22	74	31.4	149	06.0		20.0	147	22.7		25.4	321	56.9		04.1	76	55.6		29.4
23	89	33.8	164	05.1		19.7	162	23.1		25.2	336	59.7		04.2	91	57.9		29.3
24	104	36.3	179	04.1	-23	19.5	177	23.5	-23	25.0	352	02.5	+22	04.2	107	00.2	-3	29.2
Dif	—		-10		+2		+4		+2		+28		+1		+23		+1	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG:12 ^h 05.4 ^m				Edad: 15.9 ^d PHE { 4 ^h : 59/4 12 ^h : 59/1 20 ^h : 58/8 PMG: 1 ^h 43 ^m R°: 53 ^m														
	hG ☉	Dec			hG ☾	Dif			Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	42.5	-22	38.0	335	17.0	70	+21	30.1	116	60 N	7	08	8	04	9	00	18	06
1	193	42.2		37.7	349	43.0	71		18.5	118	58	7	01	7	53	8	43	18	97
2	208	41.9		37.5	4	09.1	73	+21	06.7	118	56	6	55		43	30	28	93	10
3	223	41.6		37.2	18	35.4	73	+20	54.8	119	54		49		35	18	37	89	9
4	238	41.4		36.9	33	01.8	74		42.8	120	52		44		27	8	07	45	86
5	253	41.1	-22	36.6	47	28.3	75	+20	30.7	121	50	6	39	7	20	7	58	18	53
6	268	40.8	-22	36.3	61	55.0	77	+20	18.5	122	45	6	28	7	05	7	38	19	08
7	283	40.5		36.1	76	21.9	79	+20	06.2	123	40		18	6	52	22	21	72	9
8	298	40.3		35.8	90	48.8	79	+19	53.8	124	35		09		41	7	08	32	68
9	313	40.0		35.5	105	15.9	81		41.2	126	30	6	01		30	6	57	41	65
10	328	39.7		35.2	119	43.2	83		28.6	126	20	5	45	6	12	36	19	57	59
11	343	39.4	-22	34.9	134	10.5	83	+19	15.9	127	10 N	5	30	5	56	6	18	20	11
12	358	39.2	-22	34.6	148	38.0	85	+19	03.1	128	0	5	13	5	39	6	02	20	24
13	13	38.9		34.3	163	05.7	87	+18	50.2	129	10 S	4	55		22	5	45	37	45
14	28	38.6		34.1	177	33.5	88		37.2	130	20		33	5	02	27	20	51	
15	43	38.3		33.8	192	01.4	89		24.1	131	30	4	05	4	38	5	05	21	
16	58	38.0		33.5	206	29.4	90	+18	10.9	132	35	3	47		23	4	53	15	
17	73	37.8	-22	33.2	220	57.6	92	+17	57.6	133	40	3	25	4	06	4	38	21	
18	88	37.5	-22	32.9	235	25.9	93	+17	44.3	133	45	2	56	3	44	4	21	21	
19	103	37.2		32.6	249	54.3	94		30.9	134	50	2	14		16	4	00	52	
20	118	36.9		32.3	264	22.9	96		17.4	135	52	1	49	3	02	3	49	21	
21	133	36.7		32.0	278	51.6	97	+17	03.8	136	54	1	13	2	45	38	22		
22	148	36.4		31.7	293	20.4	98	+16	50.1	137	56	**	**	2	25	24	15		
23	163	36.1		31.4	307	49.3	99		36.4	137	58	**	**	1	58	3	09		
24	178	35.8	-22	31.1	322	18.4	101	+16	22.6	138	60 S	**	**	1	19	2	50		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 16 ^h 58.8 ^m		Mag: -3.9 PMG: 12 ^h 04 ^m		Mag: +1.1 PMG: 12 ^h 10 ^m		Mag: -2.7 PMG: 0 ^h 32 ^m		Mag: +1.0 PMG: 16 ^h 49 ^m							
h	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	104	36.3	179	04.1	-23	19.5	177	23.5	-23	25.0						
1	119	38.8	194	03.2		19.2	192	23.9		24.8						
2	134	41.2	209	02.2		19.0	207	24.3		24.6						
3	149	43.7	224	01.3		18.7	222	24.7		24.4						
4	164	46.2	239	00.3		18.5	237	25.0		24.2						
5	179	48.6	253	59.4	-23	18.2	252	25.4	-23	24.0						
6	194	51.1	268	58.4	-23	18.0	267	25.8	-23	23.7						
7	209	53.6	283	57.5		17.7	282	26.2		23.5						
8	224	56.0	298	56.5		17.5	297	26.6		23.3						
9	239	58.5	313	55.6		17.2	312	26.9		23.1						
10	255	00.9	328	54.6		17.0	327	27.3		22.9						
11	270	03.4	343	53.7	-23	16.7	342	27.7	-23	22.7						
12	285	05.9	358	52.7	-23	16.4	357	28.1	-23	22.4						
13	300	08.3	13	51.8		16.2	12	28.5		22.2						
14	315	10.8	28	50.8		15.9	27	28.9		22.0						
15	330	13.3	43	49.9		15.6	42	29.2		21.8						
16	345	15.7	58	48.9		15.4	57	29.6		21.6						
17	0	18.2	73	48.0	-23	15.1	72	30.0	-23	21.4						
18	15	20.7	88	47.0	-23	14.8	87	30.4	-23	21.1						
19	30	23.1	103	46.1		14.6	102	30.8		20.9						
20	45	25.6	118	45.1		14.3	117	31.2		20.7						
21	60	28.0	133	44.2		14.0	132	31.5		20.5						
22	75	30.5	148	43.3		13.8	147	31.9		20.3						
23	90	33.0	163	42.3		13.5	162	32.3		20.0						
24	105	35.4	178	41.4	-23	13.2	177	32.7	-23	19.8						
Dif	—		-9		+3		+4		+2		+28		+1	+23		+1

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG:12 ^h 05.8 ^m				Edad: 16.9 ^d SD: 16 ^h 0 PMG: 2 ^h 36 ^m PHE { 4 ^h : 58'5 12 ^h : 58'2 20 ^h : 57'9 R°: 50 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°		h	m	h	m	h	m	h	m
0	178	35.8	-22	31.1	322	18.4	+16	22.6	60 N	15 13	16 09	17 04	19 48	95	10 32	2
1	193	35.6		30.8	336	47.6	+16	08.7	58	29	20	11	19 55	91	24	5
2	208	35.3		30.5	351	16.9	+15	54.8	56	43	29	17	20 01	88	17	8
3	223	35.0		30.2	5	46.3		40.8	54	15 55	38	23	06 85		10	12
4	238	34.7		29.9	20	15.9		26.7	52	16 05	45	28	11 82		10 05	14
5	253	34.5	-22	29.6	34	45.5	+15	12.6	50	16 14	16 52	17 33	20 16	79	9 59	17
6	268	34.2	-22	29.3	49	15.3	+14	58.4	45	16 34	17 07	17 44	20 25	74	9 48	22
7	283	33.9		29.0	63	45.2		44.1	40	16 50	20	17 54	23 69		38	27
8	298	33.7		28.7	78	15.3		29.8	35	17 03	31	18 03	40 65		30	30
9	313	33.4		28.4	92	45.4		15.5	30	15	41	11	46 62		23	33
10	328	33.1		28.1	107	15.7	+14	01.1	20	35	17 59	26	20 56	56	9 10	39
11	343	32.8	-22	27.8	121	46.0	+13	46.6	10 N	17 53	18 16	18 42	21 05	51	8 59	44
12	358	32.6	-22	27.5	136	16.5	+13	32.1	0	18 10	18 32	18 58	21 13	47	8 48	49
13	13	32.3		27.2	150	47.1		17.5	10 S	26	18 49	19 16	22 42		37	54
14	28	32.0		26.9	165	17.8	+13	02.9	20	18 44	19 09	19 38	30 37		26	58
15	43	31.7		26.6	179	48.6	+12	48.3	30	19 05	33	20 05	40 32		13	64
16	58	31.5		26.3	194	19.5		33.6	35	18	19 47	23	46 28		8 05	67
17	73	31.2	-22	26.0	208	50.5	+12	18.9	40	19 32	20 04	20 45	21 53	24	7 56	71
18	88	30.9	-22	25.7	223	21.6	+12	04.1	45	19 49	20 26	21 14	22 00	20	7 45	77
19	103	30.7		25.4	237	52.9	+11	49.3	50	20 10	20 53	21 55	09 15		33	82
20	118	30.4		25.1	252	24.2		34.5	52	20	21 07	22 19	13 13		27	85
21	133	30.1		24.7	266	55.6		19.6	54	32	24	22 53	18 10		20	88
22	148	29.9		24.4	281	27.1	+11	04.7	56	20 45	21 44	** **	23 7		13	91
23	163	29.6		24.1	295	58.7	+10	49.7	58	21 00	22 09	** **	28 5		7 05	95
24	178	29.3	-22	23.8	310	30.4	+10	34.8	60 S	21 19	22 46	** **	22 35	0	6 55	100

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 54.9 ^m		Mag: -3.9 PMG: 12 ^h 06 ^m		Mag: +1.1 PMG: 12 ^h 10 ^m		Mag: -2.7 PMG: 0 ^h 27 ^m		Mag: +1.0 PMG: 16 ^h 46 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	105	35.4	178	41.4	-23	13.2	177	32.7	-23	19.8
1	120	37.9	193	40.4		12.9	192	33.1		19.6
2	135	40.4	208	39.5		12.7	207	33.5		19.4
3	150	42.8	223	38.5		12.4	222	33.8		19.1
4	165	45.3	238	37.6		12.1	237	34.2		18.9
5	180	47.8	253	36.6	-23	11.8	252	34.6	-23	18.7
6	195	50.2	268	35.7	-23	11.5	267	35.0	-23	18.5
7	210	52.7	283	34.7		11.2	282	35.4		18.2
8	225	55.2	298	33.8		11.0	297	35.8		18.0
9	240	57.6	313	32.9		10.7	312	36.1		17.8
10	256	00.1	328	31.9		10.4	327	36.5		17.6
11	271	02.5	343	31.0	-23	10.1	342	36.9	-23	17.3
12	286	05.0	358	30.0	-23	09.8	357	37.3	-23	17.1
13	301	07.5	13	29.1		09.5	12	37.7		16.9
14	316	09.9	28	28.1		09.2	27	38.1		16.7
15	331	12.4	43	27.2		08.9	42	38.4		16.4
16	346	14.9	58	26.3		08.6	57	38.8		16.2
17	1	17.3	73	25.3	-23	08.3	72	39.2	-23	16.0
18	16	19.8	88	24.4	-23	08.0	87	39.6	-23	15.7
19	31	22.3	103	23.4		07.7	102	40.0		15.5
20	46	24.7	118	22.5		07.4	117	40.4		15.3
21	61	27.2	133	21.5		07.1	132	40.7		15.0
22	76	29.7	148	20.6		06.8	147	41.1		14.8
23	91	32.1	163	19.7		06.5	162	41.5		14.6
24	106	34.6	178	18.7	-23	06.2	177	41.9	-23	14.3
Dif	—		-9		+3		+4		+2	
									+28	+1
										+23
										+1

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 16/3 PMG:12 ^h 06.3 ^m				Edad: 17.9 ^d PHE { 4 ^h : 57/6 12 ^h : 57/3 20 ^h : 57/0 PMG: 3 ^h 24 ^m R°: 45 ^m																	
	hG ☉		Dec		hG ☾		Dif		Dec			Dif		Náutico	Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m			
0	178	29.3	-22	23.8	310	30.4	+10	34.8	150	7	07	8	03	8	58	21	22	89	10	32	0	
1	193	29.0		23.5	325	02.2		19.8	151	7	00	7	52		42	25	85		28	3		
2	208	28.8		23.2	339	34.1	129	+10	04.7	151	6	54	42	28	27	82		24	6			
3	223	28.5		22.9	354	06.1	130	+9	49.7	150	49	34	17	30	79		21	8				
4	238	28.2		22.5	8	38.2	131		34.6	151	43	26	8	06	32	76		18	10			
5	253	28.0	-22	22.2	23	10.4	132	+9	19.5	151	6	38	7	19	7	57	21	34	74	10	15	13
6	268	27.7	-22	21.9	37	42.6	132	+9	04.4	151	6	28	7	04	7	38	21	38	68	10	08	18
7	283	27.4		21.6	52	15.0	134	+8	49.3	151	18	6	52	22	41	65	10	03	22			
8	298	27.2		21.3	66	47.4	134		34.1	152	09	41	7	09	44	61	9	59	25			
9	313	26.9		20.9	81	19.9	135		18.9	152	6	01	31	6	57	46	58		55	28		
10	328	26.6		20.6	95	52.5	136	+8	03.7	152	5	46	6	13	51	52		47	35			
11	343	26.4	-22	20.3	110	25.1	136	+7	48.5	152	5	30	5	56	6	19	21	55	47	9	41	39
12	358	26.1	-22	20.0	124	57.9	138	+7	33.3	152	5	14	5	40	6	03	21	58	43	9	35	44
13	13	25.8		19.7	139	30.7	138		18.1	152	4	56	23	5	46	22	02	38		29	49	
14	28	25.6		19.3	154	03.6	139	+7	02.8	153	35	5	03	28	06	33		23	53			
15	43	25.3		19.0	168	36.6	140	+6	47.6	152	4	07	4	40	5	07	10	28		15	59	
16	58	25.0		18.7	183	09.6	140		32.3	153	3	49	25	4	55	13	25		11	62		
17	73	24.8	-22	18.4	197	42.7	141	+6	17.1	152	3	27	4	08	4	40	22	16	21	9	06	66
18	88	24.5	-22	18.0	212	15.9	142	+6	01.8	153	2	59	3	47	4	23	22	19	17	9	00	71
19	103	24.2		17.7	226	49.2	143	+5	46.5	153	2	17	19	4	02	23	12		8	53	76	
20	118	24.0		17.4	241	22.5	143		31.2	153	1	53	3	05	3	52	25	10		50	79	
21	133	23.7		17.0	255	55.9	144		15.9	152	1	19	2	49	41	27	8		47	81		
22	148	23.4		16.7	270	29.3	144	+5	00.7	153	**	**	29	27	29	5		43	84			
23	163	23.2		16.4	285	02.8	145	+4	45.4	153	**	**	2	03	3	12	31	3		38	88	
24	178	22.9	-22	16.0	299	36.4	146	+4	30.1	153	**	**	1	26	2	54	22	34	**	8	33	92

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 16 ^h 50.9 ^m		Mag: -3.9 PMG: 12 ^h 08 ^m			Mag: +1.1 PMG: 12 ^h 09 ^m			Mag: -2.7 PMG: 0 ^h 23 ^m			Mag: +1.0 PMG: 16 ^h 42 ^m							
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	106	34.6	178	18.7	-23	06.2	177	41.9	-23	14.3	354	17.9	+22	06.9	108	51.4			
1	121	37.0	193	17.8		05.9	192	42.3		14.1	9	20.7		07.0	123	53.7			
2	136	39.5	208	16.8		05.6	207	42.7		13.9	24	23.6		07.1	138	56.0			
3	151	42.0	223	15.9		05.3	222	43.0		13.6	39	26.4		07.1	153	58.3			
4	166	44.4	238	15.0		05.0	237	43.4		13.4	54	29.2		07.2	169	00.6			
5	181	46.9	253	14.0	-23	04.7	252	43.8	-23	13.2	69	32.0	+22	07.2	184	03.0			
6	196	49.4	268	13.1	-23	04.4	267	44.2	-23	12.9	84	34.9	+22	07.3	199	05.3			
7	211	51.8	283	12.2		04.0	282	44.6		12.7	99	37.7		07.3	214	07.6			
8	226	54.3	298	11.2		03.7	297	45.0		12.5	114	40.5		07.4	229	09.9			
9	241	56.8	313	10.3		03.4	312	45.4		12.2	129	43.3		07.4	244	12.2			
10	256	59.2	328	09.3		03.1	327	45.7		12.0	144	46.1		07.5	259	14.5			
11	272	01.7	343	08.4	-23	02.8	342	46.1	-23	11.7	159	49.0	+22	07.6	274	16.8			
12	287	04.1	358	07.5	-23	02.5	357	46.5	-23	11.5	174	51.8	+22	07.6	289	19.1			
13	302	06.6	13	06.5		02.1	12	46.9		11.3	189	54.6		07.7	304	21.4			
14	317	09.1	28	05.6		01.8	27	47.3		11.0	204	57.4		07.7	319	23.8			
15	332	11.5	43	04.7		01.5	42	47.7		10.8	220	00.3		07.8	334	26.1			
16	347	14.0	58	03.7		01.2	57	48.0		10.5	235	03.1		07.8	349	28.4			
17	2	16.5	73	02.8	-23	00.8	72	48.4	-23	10.3	250	05.9	+22	07.9	4	30.7			
18	17	18.9	88	01.9	-23	00.5	87	48.8	-23	10.1	265	08.7	+22	08.0	19	33.0			
19	32	21.4	103	00.9	-23	00.2	102	49.2		09.8	280	11.5		08.0	34	35.3			
20	47	23.9	118	00.0	-22	59.8	117	49.6		09.6	295	14.4		08.1	49	37.6			
21	62	26.3	132	59.0		59.5	132	50.0		09.3	310	17.2		08.1	64	39.9			
22	77	28.8	147	58.1		59.2	147	50.4		09.1	325	20.0		08.2	79	42.2			
23	92	31.3	162	57.2		58.8	162	50.7		08.8	340	22.8		08.2	94	44.5			
24	107	33.7	177	56.2	-22	58.5	177	51.1	-23	08.6	355	25.7	+22	08.3	109	46.9			
Dif	—		-9			+3	+4			+2	+28		+1		+23			+1	

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16/3 PMG:12 ^h 06.7 ^m				Edad: 18.9 ^d SD: 15'5 PMG: 4 ^h 09 ^m PHE { 4 ^h : 56/7 12 ^h : 56/4 20 ^h : 56/2 Rº: 43 ^m														
	hG ☉	Dec			hG ☾	Dif								Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	178	22.9	-22	16.0	299	36.4	+4	30.1	60 N	15	17	16	12	17	07		22	51	87
1	193	22.6		15.7	314	10.0	+4	14.8	58	33		23	14		50	84	31	3	
2	208	22.4		15.4	328	43.7	+3	59.5	56	46		32	20		49	81	30	6	
3	223	22.1		15.0	343	17.5		44.2	54	15	58	40	26		49	78	29	9	
4	238	21.8		14.7	357	51.3		29.0	52	16	08	48	31		48	76	28	12	
5	253	21.6	-22	14.4	12	25.1	+3	13.7	50	16	17	16	55	17	35	22	48	73	
6	268	21.3	-22	14.0	26	59.0	+2	58.4	45	16	36	17	09	17	46	22	46	69	
7	283	21.0		13.7	41	33.0		43.2	40	16	52	22	17	56	46	64	25	23	
8	298	20.8		13.4	56	07.0		27.9	35	17	05	33	18	04	45	60	24	26	
9	313	20.5		13.0	70	41.1	+2	12.7	30	17		17	43	12	44	57	23	29	
10	328	20.3		12.7	85	15.2	+1	57.5	20	37		18	00	28	43	52	22	34	
11	343	20.0	-22	12.3	99	49.3	+1	42.3	10 N	17	54	18	17	18	43	22	42	47	
12	358	19.7	-22	12.0	114	23.5	+1	27.1	0	18	10	18	33	18	59	22	41	43	
13	13	19.5		11.7	128	57.8	+1	11.9	10 S	27		18	50	19	17	40	39	18	
14	28	19.2		11.3	143	32.0	+0	56.7	20	18	45	19	09	19	38	39	34	16	
15	43	18.9		11.0	158	06.4		41.6	30	19	05	33	20	05	38	29	14	59	
16	58	18.7		10.6	172	40.7		26.5	35		18	19	47	23	38	25	13	62	
17	73	18.4	-22	10.3	187	15.1	+0	11.3	40	19	32	20	04	20	44	22	37	22	
18	88	18.2	-22	09.9	201	49.6	-0	03.8	45	19	49	20	25	21	13	22	36	18	
19	103	17.9		09.6	216	24.0		18.8	50	20	09	20	52	21	53	35	14	09	
20	118	17.6		09.2	230	58.6		33.9	52		19	21	06	22	16	35	11	09	
21	133	17.4		08.9	245	33.1	-0	48.9	54	31		22		22	48	35	9	08	
22	148	17.1		08.5	260	07.7	-1	04.0	56	44		21	41	** **		34	7	07	
23	163	16.9		08.2	274	42.3		19.0	58	20	59	22	06	** **		34	3	06	
24	178	16.6	-22	07.8	289	16.9	-1	33.9	60 S	21	17	22	41	** **		22	33	0	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 16 ^h 47.0 ^m		Mag: -3.9 PMG: 12 ^h 09 ^m				Mag: +1.1 PMG: 12 ^h 08 ^m				Mag: -2.7 PMG: 0 ^h 18 ^m				Mag: +1.0 PMG: 16 ^h 38 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	107	33.7	177	56.2	-22	58.5	177	51.1	-23	08.6	355	25.7	+22	08.3	109	46.9	-3	23.9
1	122	36.2	192	55.3		58.2	192	51.5		08.4	10	28.5		08.3	124	49.2		23.9
2	137	38.6	207	54.4		57.8	207	51.9		08.1	25	31.3		08.4	139	51.5		23.8
3	152	41.1	222	53.4		57.5	222	52.3		07.9	40	34.1		08.5	154	53.8		23.7
4	167	43.6	237	52.5		57.2	237	52.7		07.6	55	36.9		08.5	169	56.1		23.6
5	182	46.0	252	51.6	-22	56.8	252	53.1	-23	07.4	70	39.8	+22	08.6	184	58.4	-3	23.6
6	197	48.5	267	50.7	-22	56.5	267	53.4	-23	07.1	85	42.6	+22	08.6	200	00.7	-3	23.5
7	212	51.0	282	49.7		56.1	282	53.8		06.9	100	45.4		08.7	215	03.0		23.4
8	227	53.4	297	48.8		55.8	297	54.2		06.6	115	48.2		08.7	230	05.3		23.3
9	242	55.9	312	47.9		55.4	312	54.6		06.4	130	51.1		08.8	245	07.6		23.3
10	257	58.4	327	46.9		55.1	327	55.0		06.1	145	53.9		08.9	260	09.9		23.2
11	273	00.8	342	46.0	-22	54.7	342	55.4	-23	05.9	160	56.7	+22	08.9	275	12.3	-3	23.1
12	288	03.3	357	45.1	-22	54.4	357	55.8	-23	05.6	175	59.5	+22	09.0	290	14.6	-3	23.0
13	303	05.8	12	44.1		54.0	12	56.1		05.4	191	02.4		09.0	305	16.9		23.0
14	318	08.2	27	43.2		53.7	27	56.5		05.1	206	05.2		09.1	320	19.2		22.9
15	333	10.7	42	42.3		53.3	42	56.9		04.9	221	08.0		09.1	335	21.5		22.8
16	348	13.1	57	41.4		53.0	57	57.3		04.6	236	10.8		09.2	350	23.8		22.7
17	3	15.6	72	40.4	-22	52.6	72	57.7	-23	04.4	251	13.6	+22	09.2	5	26.1	-3	22.7
18	18	18.1	87	39.5	-22	52.3	87	58.1	-23	04.1	266	16.5	+22	09.3	20	28.4	-3	22.6
19	33	20.5	102	38.6		51.9	102	58.5		03.9	281	19.3		09.4	35	30.7		22.5
20	48	23.0	117	37.6		51.5	117	58.8		03.6	296	22.1		09.4	50	33.0		22.4
21	63	25.5	132	36.7		51.2	132	59.2		03.4	311	24.9		09.5	65	35.3		22.4
22	78	27.9	147	35.8		50.8	147	59.6		03.1	326	27.8		09.5	80	37.6		22.3
23	93	30.4	162	34.9		50.5	163	00.0		02.9	341	30.6		09.6	95	39.9		22.2
24	108	32.9	177	33.9	-22	50.1	178	00.4	-23	02.6	356	33.4	+22	09.6	110	42.2	-3	22.1
Dif	—		-9		+4		+4		+2		+28		+1		+23		+	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 16 ^h 3 PMG:12 ^h 07.1 ^m				Edad: 19.9 ^d PHE { 4 ^h : 55'9 12 ^h : 55'6 20 ^h : 55'4 PMG: 4 ^h 51 ^m R°: 41 ^m																			
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m						
0	178	16.6	-22	07.8	289	16.9	-1	33.9	150	58	60 N	7 06	8 01	8 56	** ** *		10 31	**						
1	193	16.3		07.5	303	51.6	-1	48.9	149	58		6 59	7 51	40	** ** *		33	2						
2	208	16.1		07.1	318	26.2	-2	03.8	149	56		53	41	27	** ** *		35	5						
3	223	15.8		06.8	333	00.9		18.7	149	54		48	33	16	** ** *		37	8						
4	238	15.6		06.4	347	35.7		33.6	149	52		43	26	8 05	** ** *		39	10						
5	253	15.3	-22	06.1	2	10.4	-2	48.4	148	50		6 38	7 19	7 56	23 59 71		10 40	13						
6	268	15.0	-22	05.7	16	45.2	-3	03.2	148	45		6 27	7 04	7 37	23 53 66		10 43	18						
7	283	14.8		05.4	31	20.0		18.0	148	40		18	6 52	22	48 62		46	21						
8	298	14.5		05.0	45	54.8		32.8	148	35		09	41	7 08	44 58		49	24						
9	313	14.3		04.6	60	29.6	-3	47.5	147	30		6 01	31	6 57	40 55		51	27						
10	328	14.0		04.3	75	04.5	-4	02.2	147	20		5 46	6 13	37	34 50		55	32						
11	343	13.8	-22	03.9	89	39.3	-4	16.8	146	10 N		5 31	5 57	6 20	23 28 45		10 58	37						
12	358	13.5	-22	03.6	104	14.2	-4	31.5	147	0		5 15	5 41	6 03	23 22 42		11 01	41						
13	13	13.2		03.2	118	49.1	-4	46.1	146	10 S		4 57	24	5 47	17 37		04	46						
14	28	13.0		02.9	133	24.0	-5	00.6	145	20		36	5 05	29	12 32		07	51						
15	43	12.7		02.5	147	58.9		15.2	146	30		4 09	4 41	5 08	05 28		11	56						
16	58	12.5		02.1	162	33.8		29.6	144	35		3 51	27	4 56	23 02 25		13	59						
17	73	12.2	-22	01.8	177	08.7	-5	44.1	145	40		3 30	4 10	4 42	22 58 21		11 16	62						
18	88	12.0	-22	01.4	191	43.7	-5	58.5	144	45		3 02	3 49	4 26	22 53 18		11 19	66						
19	103	11.7		01.0	206	18.6	-6	12.9	144	50		2 21	22	4 05	48 12		22	72						
20	118	11.5		00.7	220	53.5		27.2	143	52		1 58	3 08	3 55	45 11		24	73						
21	133	11.2	-22	00.3	235	28.5		41.5	143	54		1 26	2 52	44	42 9		26	76						
22	148	10.9	-21	59.9	250	03.4	-6	55.8	143	56	** ** *	** ** *	33	31	39 6		28	79						
23	163	10.7		59.6	264	38.4	-7	10.0	142	58	** ** *	** ** *	2 08	3 16	36 2		30	82						
24	178	10.4	-21	59.2	279	13.3	-7	24.2	142	60 S	** ** *	** ** *	1 33	2 58	22 32 **		11 32	86						
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 16 ^h 43.1 ^m			Mag: -3.9 PMG: 12 ^h 10 ^m			Mag: +1.1 PMG: 12 ^h 08 ^m			Mag: -2.7 PMG: 0 ^h 14 ^m			Mag: +1.0 PMG: 16 ^h 35 ^m											
	hG ♈			hG ♀			hG ♂			hG ♃			hG ♄											
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	108	32.9	177	33.9	-22	50.1	178	00.4	-23	02.6	356	33.4	+22	09.6	110	42.2	-3	22.1						
1	123	35.3	192	33.0		49.7	193	00.8		02.4	11	36.2		09.7	125	44.5		22.0						
2	138	37.8	207	32.1		49.4	208	01.2		02.1	26	39.1		09.7	140	46.9		22.0						
3	153	40.2	222	31.2		49.0	223	01.6		01.8	41	41.9		09.8	155	49.2		21.9						
4	168	42.7	237	30.2		48.6	238	01.9		01.6	56	44.7		09.9	170	51.5		21.8						
5	183	45.2	252	29.3	-22	48.3	253	02.3	-23	01.3	71	47.5	+22	09.9	185	53.8	-3	21.7						
6	198	47.6	267	28.4	-22	47.9	268	02.7	-23	01.1	86	50.3	+22	10.0	200	56.1	-3	21.7						
7	213	50.1	282	27.5		47.5	283	03.1		00.8	101	53.2		10.0	215	58.4		21.6						
8	228	52.6	297	26.5		47.1	298	03.5		00.6	116	56.0		10.1	231	00.7		21.5						
9	243	55.0	312	25.6		46.8	313	03.9	-23	00.3	131	58.8		10.1	246	03.0		21.4						
10	258	57.5	327	24.7		46.4	328	04.3	-23	00.0	147	01.6		10.2	261	05.3		21.4						
11	274	00.0	342	23.8	-22	46.0	343	04.7	-22	59.8	162	04.5	+22	10.3	276	07.6	-3	21.3						
12	289	02.4	357	22.8	-22	45.6	358	05.0	-22	59.5	177	07.3	+22	10.3	291	09.9	-3	21.2						
13	304	04.9	12	21.9		45.2	13	05.4		59.3	192	10.1		10.4	306	12.2		21.1						
14	319	07.4	27	21.0		44.9	28	05.8		59.0	207	12.9		10.4	321	14.5		21.0						
15	334	09.8	42	20.1		44.5	43	06.2		58.7	222	15.8		10.5	336	16.8		21.0						
16	349	12.3	57	19.2		44.1	58	06.6		58.5	237	18.6		10.5	351	19.1		20.9						
17	4	14.7	72	18.2	-22	43.7	73	07.0	-22	58.2	252	21.4	+22	10.6	6	21.4	-3	20.8						
18	19	17.2	87	17.3	-22	43.3	88	07.4	-22	57.9	267	24.2	+22	10.6	21	23.7	-3	20.7						
19	34	19.7	102	16.4		42.9	103	07.8		57.7	282	27.1		10.7	36	26.0		20.7						
20	49	22.1	117	15.5		42.6	118	08.1		57.4	297	29.9		10.8	51	28.3		20.6						
21	64	24.6	132	14.6		42.2	133	08.5		57.1	312	32.7		10.8	66	30.6		20.5						
22	79	27.1	147	13.6		41.8	148	08.9		56.9	327	35.5		10.9	81	32.9		20.4						
23	94	29.5	162	12.7		41.4	163	09.3		56.6	342	38.3		10.9	96	35.2		20.3						
24	109	32.0	177	11.8	-22	41.0	178	09.7	-22	56.4	357	41.2	+22	11.0	111	37.5	-3	20.3						
Dif	—			-9			+4			+3			+28			+1			+23			+1		

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna					
	SD: 16 ^h 3 PMG:12 ^h 07.5 ^m				Edad: 20.9 ^d SD: 15 ^h 1 PMG: 5 ^h 32 ^m								PHE { 4 ^h : 55/2 12 ^h : 55/0 20 ^h : 54/8 Rº: 43 ^m											
	hG ☉		Dec		hG ☾		Dif		Dec				Dif		Civil		Náutico		Hora Rº		Hora Rº			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m		
0	178	10.4	-21	59.2	279	13.3		-7	24.2			60 N	15	21	16	15	17	10	0	17	88	10	30	1
1	193	10.2		58.8	293	48.2			38.3			58		36	26	17		13	83		35	5		
2	208	09.9		58.5	308	23.2		-7	52.4			56	15	49	35	23		09	80		40	8		
3	223	09.7		58.1	322	58.1		-8	06.5			54	16	01	43	28		05	78		45	10		
4	238	09.4		57.7	337	33.0			20.5			52		11	50	33		0	02	75		49	13	
5	253	09.2	-21	57.3	352	07.9		-8	34.4			50	16	19	16	57	17	38	**	**	**	10	53	15
6	268	08.9	-21	57.0		6	42.8		-8	48.3		45	16	38	17	12	17	48	**	**	**	11	01	19
7	283	08.7		56.6	21	17.7		-9	02.2			40	16	54	24	17	57	**	**	**		07	24	
8	298	08.4		56.2	35	52.6			16.0			35	17	07	35	18	06	**	**	**		13	27	
9	313	08.2		55.8	50	27.5			29.8			30		18	17	44	14	**	**	**		18	30	
10	328	07.9		55.5	65	02.4			43.5			20		38	18	02	29	**	**	**		27	35	
11	343	07.7	-21	55.1	79	37.2		-9	57.2			10 N	17	55	18	18	18	44	**	**	**	11	35	39
12	358	07.4	-21	54.7	94	12.1		-10	10.8			0	18	11	18	33	18	59	**	**	**	11	42	44
13	13	07.2		54.3	108	46.9			24.4			10 S		28	18	50	19	17	23	54	41		50	47
14	28	06.9		54.0	123	21.7			37.9			20	18	45	19	09	19	38		44	36	11	58	51
15	43	06.7		53.6	137	56.5		-10	51.4			30	19	05	32	20	05		33	31		12	07	57
16	58	06.4		53.2	152	31.2		-11	04.8			35		17	19	47	22		27	28		12	60	
17	73	06.2	-21	52.8	167	06.0		-11	18.2			40	19	31	20	03	20	44	23	19	25	12	18	63
18	88	05.9	-21	52.4	181	40.7		-11	31.5			45	19	48	20	24	21	11	23	11	21	12	25	67
19	103	05.7		52.1	196	15.4			44.8			50	20	08	20	51	21	51	23	00	17		34	72
20	118	05.4		51.7	210	50.1		-11	58.0			52		18	21	04	22	13	22	56	14		37	75
21	133	05.2		51.3	225	24.8		-12	11.1			54	29		20	22	43		51	11		42	77	
22	148	04.9		50.9	239	59.4			24.2			56		42	21	39	**	**		45	8		47	80
23	163	04.7		50.5	254	34.0			37.3			58	20	56	22	02	**	**		38	6		52	84
24	178	04.4	-21	50.1	269	08.6		-12	50.3			60 S	21	14	22	35	**	**	22	31	2	12	58	88
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG 16 ^h 39.1 ^m			Mag: -3.9 PMG: 12 ^h 12 ^m			Mag: +1.1 PMG: 12 ^h 07 ^m			Mag: -2.7 PMG: 0 ^h 09 ^m			Mag: +1.0 PMG: 16 ^h 31 ^m											
	hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	109	32.0	177	11.8	-22	41.0	178	09.7	-22	56.4	357	41.2	+22	11.0	111	37.5	-3	20.3						
1	124	34.5	192	10.9		40.6	193	10.1		56.1	12	44.0		11.0	126	39.8		20.2						
2	139	36.9	207	10.0		40.2	208	10.5		55.8	27	46.8		11.1	141	42.2		20.1						
3	154	39.4	222	09.1		39.8	223	10.9		55.6	42	49.6		11.1	156	44.5		20.0						
4	169	41.9	237	08.1		39.4	238	11.2		55.3	57	52.5		11.2	171	46.8		20.0						
5	184	44.3	252	07.2	-22	39.0	253	11.6	-22	55.0	72	55.3	+22	11.3	186	49.1	-3	19.9						
6	199	46.8	267	06.3	-22	38.6	268	12.0	-22	54.7	87	58.1	+22	11.3	201	51.4	-3	19.8						
7	214	49.2	282	05.4		38.2	283	12.4		54.5	103	00.9		11.4	216	53.7		19.7						
8	229	51.7	297	04.5		37.8	298	12.8		54.2	118	03.8		11.4	231	56.0		19.6						
9	244	54.2	312	03.6		37.4	313	13.2		53.9	133	06.6		11.5	246	58.3		19.6						
10	259	56.6	327	02.6		37.0	328	13.6		53.7	148	09.4		11.5	262	00.6		19.5						
11	274	59.1	342	01.7	-22	36.6	343	14.0	-22	53.4	163	12.2	+22	11.6	277	02.9	-3	19.4						
12	290	01.6	357	00.8	-22	36.2	358	14.4	-22	53.1	178	15.1	+22	11.6	292	05.2	-3	19.3						
13	305	04.0	11	59.9		35.8	13	14.7		52.9	193	17.9		11.7	307	07.5		19.2						
14	320	06.5	26	59.0		35.3	28	15.1		52.6	208	20.7		11.8	322	09.8		19.2						
15	335	09.0	41	58.1		34.9	43	15.5		52.3	223	23.5		11.8	337	12.1		19.1						
16	350	11.4	56	57.2		34.5	58	15.9		52.0	238	26.3		11.9	352	14.4		19.0						
17	5	13.9	71	56.2	-22	34.1	73	16.3	-22	51.8	253	29.2	+22	11.9	7	16.7	-3	18.9						
18	20	16.3	86	55.3	-22	33.7	88	16.7	-22	51.5	268	32.0	+22	12.0	22	19.0	-3	18.9						
19	35	18.8	101	54.4		33.3	103	17.1		51.2	283	34.8		12.0	37	21.3		18.8						
20	50	21.3	116	53.5		32.9	118	17.5		50.9	298	37.6		12.1	52	23.6		18.7						
21	65	23.7	131	52.6		32.4	133	17.9		50.7	313	40.5		12.1	67	25.9		18.6						
22	80	26.2	146	51.7		32.0	148	18.3		50.4	328	43.3		12.2	82	28.2		18.5						
23	95	28.7	161	50.8		31.6	163	18.6		50.1	343	46.1		12.3	97	30.5		18.5						
24	110	31.1	176	49.9	-22	31.2	178	19.0	-22	49.8	358	48.9	+22	12.3	112	32.8	-3	18.4						
Dif	—		-9		+4		+4		+3		+28		+1		+23		+							

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 16'3 PMG:12 ^h 07.9 ^m				Edad: 21.9 ^d SD: 14'9 PMG: 6 ^h 14 ^m PHE { 4 ^h : 54'7 12 ^h : 54'5 20 ^h : 54'4 Rº: 43 ^m																
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	178	04.4	-21	50.1	269	08.6	-12	50.3	129	50.3	129	60 N	7	04	7	59	8	53	1	43	88
1	193	04.2		49.7	283	43.1	-13	03.2	128	03.2	128	58	6	58		49	38		35	83	
2	208	03.9		49.4	298	17.7		156	129	16.0	129	56		52		40	25		28	79	
3	223	03.7		49.0	312	52.2		155	129	28.9	129	54		47		32	14		21	77	
4	238	03.4		48.6	327	26.6		154	127	41.6	127	52		42		25	8	04	16	73	
5	253	03.2	-21	48.2	342	01.1	-13	54.3	127	54.3	127	50		6	37	7	18	7	55	1	
6	268	02.9	-21	47.8	356	35.5	-14	06.9	126	06.9	126	45		6	27	7	04	7	37	0	
7	283	02.7		47.4	11	09.8		153	126	19.5	126	40		18		6	51	21	50	62	
8	298	02.4		47.0	25	44.1		153	125	32.0	125	35			09	41	7	08	42	59	
9	313	02.2		46.6	40	18.4		153	124	44.4	124	30		6	01	31	6	57	35	56	
10	328	01.9		46.2	54	52.7	-14	56.8	124	56.8	124	20		5	47	6	14	37	24	50	
11	343	01.7	-21	45.8	69	26.9	-15	09.1	123	09.1	123	10 N		5	32	5	58	6	20	0	
12	358	01.4	-21	45.4	84	01.1	-15	21.3	122	21.3	122	0		5	16	5	42	6	04	0	
13	13	01.2		45.0	98	35.2		151	121	33.5	121	10 S		4	58		25	5	48	**	
14	28	01.0		44.6	113	09.3		151	121	45.6	121	20			37		5	06	30	**	
15	43	00.7		44.2	127	43.4	-15	57.6	120	57.6	120	30		4	11	4	43	5	10	**	
16	58	00.5		43.8	142	17.4	-16	09.6	120	09.6	120	35		3	53		29	4	58	23	
17	73	00.2	-21	43.4	156	51.4	-16	21.5	119	21.5	119	40		3	32	4	12	4	44	23	
18	88	00.0	-21	43.0	171	25.3	-16	33.3	118	33.3	118	45		3	05	3	52	4	28	23	
19	102	59.7		42.6	185	59.2		149	117	45.0	117	50		2	25		25	4	07	15	
20	117	59.5		42.2	200	33.1	-16	56.7	117	56.7	117	52		2	03	3	12	3	58	08	
21	132	59.3		41.8	215	06.9	-17	08.3	116	08.3	116	54		1	33	2	56	47	23	01	
22	147	59.0		41.4	229	40.6		147	116	19.9	116	56		0	32		37	34	22	52	
23	162	58.8		41.0	244	14.3		147	114	31.3	114	58		**	**		2	13	19	42	
24	177	58.5	-21	40.6	258	48.0	-17	42.7	114	42.7	114	60 S		**	**	1	41	3	02	22	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 35.2 ^m		Mag: -3.9 PMG: 12 ^h 13 ^m		Mag: +1.1 PMG: 12 ^h 06 ^m		Mag: -2.7 PMG: 0 ^h 05 ^m		Mag: +1.0 PMG: 16 ^h 27 ^m	
	hG ♀		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	110	31.1	176	49.9	-22	31.2	178	19.0	-22	49.8
1	125	33.6	191	49.0		30.8	193	19.4		49.6
2	140	36.1	206	48.0		30.3	208	19.8		49.3
3	155	38.5	221	47.1		29.9	223	20.2		49.0
4	170	41.0	236	46.2		29.5	238	20.6		48.7
5	185	43.5	251	45.3	-22	29.0	253	21.0	-22	48.4
6	200	45.9	266	44.4	-22	28.6	268	21.4	-22	48.2
7	215	48.4	281	43.5		28.2	283	21.8		47.9
8	230	50.8	296	42.6		27.8	298	22.2		47.6
9	245	53.3	311	41.7		27.3	313	22.5		47.3
10	260	55.8	326	40.8		26.9	328	22.9		47.0
11	275	58.2	341	39.9	-22	26.5	343	23.3	-22	46.8
12	291	00.7	356	39.0	-22	26.0	358	23.7	-22	46.5
13	306	03.2	11	38.1		25.6	13	24.1		46.2
14	321	05.6	26	37.2		25.1	28	24.5		45.9
15	336	08.1	41	36.3		24.7	43	24.9		45.6
16	351	10.6	56	35.4		24.3	58	25.3		45.3
17	6	13.0	71	34.5	-22	23.8	73	25.7	-22	45.1
18	21	15.5	86	33.5	-22	23.4	88	26.1	-22	44.8
19	36	18.0	101	32.6		22.9	103	26.4		44.5
20	51	20.4	116	31.7		22.5	118	26.8		44.2
21	66	22.9	131	30.8		22.0	133	27.2		43.9
22	81	25.3	146	29.9		21.6	148	27.6		43.6
23	96	27.8	161	29.0		21.1	163	28.0		43.3
24	111	30.3	176	28.1	-22	20.7	178	28.4	-22	43.1
Dif	—		-9		+4		+4		+3	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG:12 ^h 08.3 ^m				Edad: 22.9 ^d SD: 14'8 PMG: 6 ^h 57 ^m PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2 R°: 47 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	177	58.5	-21	40.6	258	48.0	-17	42.7	60 N	15 25	16 19	17 13	3 11 93	10 30 3		
1	192	58.3		40.2	273	21.6	-17	54.1	58	40	29	20	2 58 87	43 10		
2	207	58.0		39.8	287	55.2	-18	05.3	56	15 53	38	26	47 83	10 55 14		
3	222	57.8		39.4	302	28.7		16.5	54	16 04	46	31	38 78	11 05 17		
4	237	57.6		39.0	317	02.1		27.6	52	13	53	36	29 76	15 20		
5	252	57.3	-21	38.6	331	35.5	-18	38.6	50	16 22	16 59	17 40	2 22 72	11 23 22		
6	267	57.1	-21	38.2	346	08.9	-18	49.5	45	16 41	17 14	17 50	2 05 68	11 40 28		
7	282	56.8		37.8	0	42.2	-19	00.3	40	16 56	26	17 59	1 52 64	11 55 31		
8	297	56.6		37.4	15	15.4		11.1	35	17 09	36	18 08	41 61	12 07 34		
9	312	56.4		37.0	29	48.6		21.8	30	20	17 46	15	31 58	18 36		
10	327	56.1		36.6	44	21.8		32.4	20	39	18 03	30	14 54	36 41		
11	342	55.9	-21	36.1	58	54.8	-19	42.9	10 N	17 56	18 19	18 45	1 00 50	12 53 44		
12	357	55.6	-21	35.7	73	27.9	-19	53.4	0	18 12	18 34	19 00	0 47 46	13 08 47		
13	12	55.4		35.3	88	00.8	-20	03.8	10 S	28	18 51	17	33 43	23 51		
14	27	55.2		34.9	102	33.8		14.0	20	18 45	19 09	19 38	19 39	39 55		
15	42	54.9		34.5	117	06.6		24.2	30	19 05	32	20 05	0 03 34	13 58 59		
16	57	54.7		34.1	131	39.4		34.3	35	17	19 46	22	** ** *	14 09 61		
17	72	54.4	-21	33.7	146	12.2	-20	44.3	40	19 31	20 03	20 43	** ** *	14 22 64		
18	87	54.2	-21	33.2	160	44.8	-20	54.3	45	19 47	20 23	21 10	23 54 30	14 37 68		
19	102	54.0		32.8	175	17.5	-21	04.1	50	20 07	20 49	21 48	34 26	14 56 72		
20	117	53.7		32.4	189	50.0		13.9	52	17	21 02	22 09	25 23	15 05 75		
21	132	53.5		32.0	204	22.5		23.5	54	27	17	22 38	14 21	15 78		
22	147	53.3		31.6	218	55.0		33.1	56	40	36	23 28	23 02 17	26 82		
23	162	53.0		31.1	233	27.3		42.6	58	20 54	21 58	** ** *	22 49 12	39 86		
24	177	52.8	-21	30.7	247	59.7	-21	52.0	60 S	21 11	22 29	** ** *	22 33 6	15 54 93		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 16 ^h 31.3 ^m		Mag: -3.9 PMG: 12 ^h 15 ^m		Mag: +1.1 PMG: 12 ^h 06 ^m		Mag: -2.7 PMG: 0 ^h 00 ^m		Mag: +1.0 PMG: 16 ^h 24 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	111	30.3	176	28.1	-22	20.7	178	28.4	-22	43.1						
1	126	32.7	191	27.2		20.2	193	28.8		42.8						
2	141	35.2	206	26.3		19.8	208	29.2		42.5						
3	156	37.7	221	25.4		19.3	223	29.6		42.2						
4	171	40.1	236	24.5		18.9	238	30.0		41.9						
5	186	42.6	251	23.6	-22	18.4	253	30.4	-22	41.6						
6	201	45.1	266	22.7	-22	18.0	268	30.8	-22	41.3						
7	216	47.5	281	21.8		17.5	283	31.1		41.0						
8	231	50.0	296	20.9		17.0	298	31.5		40.7						
9	246	52.4	311	20.0		16.6	313	31.9		40.4						
10	261	54.9	326	19.1		16.1	328	32.3		40.2						
11	276	57.4	341	18.2	-22	15.6	343	32.7	-22	39.9						
12	291	59.8	356	17.3	-22	15.2	358	33.1	-22	39.6						
13	307	02.3	11	16.5		14.7	13	33.5		39.3						
14	322	04.8	26	15.6		14.2	28	33.9		39.0						
15	337	07.2	41	14.7		13.8	43	34.3		38.7						
16	352	09.7	56	13.8		13.3	58	34.7		38.4						
17	7	12.2	71	12.9	-22	12.8	73	35.1	-22	38.1						
18	22	14.6	86	12.0	-22	12.4	88	35.5	-22	37.8						
19	37	17.1	101	11.1		11.9	103	35.9		37.5						
20	52	19.6	116	10.2		11.4	118	36.3		37.2						
21	67	22.0	131	09.3		10.9	133	36.6		36.9						
22	82	24.5	146	08.4		10.5	148	37.0		36.6						
23	97	26.9	161	07.5		10.0	163	37.4		36.3						
24	112	29.4	176	06.6	-22	09.5	178	37.8	-22	36.0						
Dif	—		-9		+5		+4		+3		-8972	+1		+23		+1

UT	SOL		☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 08.7 ^m		Edad: 23.9 ^d PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1 PMG: 7 ^h 42 ^m R°: 48 ^m														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	177	52.8	-21	30.7	247	59.7	-21	52.0	93	60 N	7 03	7 57	8 51	4 42	93	10 32	6
1	192	52.5		30.3	262	31.9	-22	01.3	92	58	6 57	47	36	24	84	10 51	14
2	207	52.3		29.9	277	04.1		10.5	91	56	51	38	23	4	08	80	11 07
3	222	52.1		29.4	291	36.2		19.6	90	54	46	31	12	3	55	76	21
4	237	51.8		29.0	306	08.3		28.6	89	52	41	23	8	03	43	73	33
5	252	51.6	-21	28.6	320	40.3	-22	37.5	88	50	6 36	7 17	7 54	3 33	70	11 44	28
6	267	51.4	-21	28.2	335	12.3	-22	46.3	88	45	6 26	7 03	7 36	3 12	65	12 06	33
7	282	51.1		27.7	349	44.1	-22	55.1	88	40	17	6 51	21	2	55	62	24
8	297	50.9		27.3	4	16.0	-23	03.7	86	35	09	40	7 08	40	59	40	38
9	312	50.7		26.9	18	47.7		12.2	85	30	6 01	31	6 57	28	57	12	53
10	327	50.4		26.5	33	19.4		20.6	84	20	5 47	6 14	38	2	06	54	13
11	342	50.2	-21	26.0	47	51.0	-23	29.0	84	10 N	5 32	5 58	6 21	1	48	50	13
12	357	50.0	-21	25.6	62	22.6	-23	37.2	82	0	5 17	5 43	6 05	1	31	47	13
13	12	49.7		25.2	76	54.1		45.3	81	10 S	5 00	26	5 49	1	14	45	14
14	27	49.5		24.7	91	25.5	-23	53.3	80	20	4 39	5 08	32	0	56	42	32
15	42	49.3		24.3	105	56.9	-24	01.2	79	30	4 12	4 45	12	36	37	14	55
16	57	49.0		23.9	120	28.2		09.0	78	35	3 56	31	5	00	24	35	15
17	72	48.8	-21	23.4	134	59.4	-24	16.7	77	40	3 35	4 15	4 46	0	10	32	15
18	87	48.6	-21	23.0	149	30.6	-24	24.3	76	45	3 08	3 54	4	30	**	**	**
19	102	48.3		22.6	164	01.7		31.8	75	50	2 29	28	10	23	58	33	16
20	117	48.1		22.1	178	32.8		39.2	74	52	2 08	15	4	01	47	30	18
21	132	47.9		21.7	193	03.7		46.5	73	54	1 39	3 00	3	50	33	28	31
22	147	47.7		21.3	207	34.7	-24	53.6	71	56	0 50	2 42	38	18	24	16	46
23	162	47.4		20.8	222	05.5	-25	00.7	71	58	**	**	2	19	23	00	19
24	177	47.2	-21	20.4	236	36.3	-25	07.6	69	60 S	**	**	1	48	3	07	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 16 ^h 27.3 ^m		Mag: -3.9 PMG: 12 ^h 16 ^m		Mag: +1.1 PMG: 12 ^h 05 ^m		Mag: -2.7 PMG: 23 ^h 51 ^m		Mag: +1.0 PMG: 16 ^h 20 ^m					
	hG ♊	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	112	29.4	176	06.6	-22	09.5	1	04.5	+22	14.9				
1	127	31.9	191	05.7		09.0	16	07.3		15.0				
2	142	34.3	206	04.8		08.5	31	10.1		15.0				
3	157	36.8	221	03.9		08.1	46	12.9		15.1				
4	172	39.3	236	03.1		07.6	61	15.8		15.2				
5	187	41.7	251	02.2	-22	07.1	76	18.6	+22	15.2				
6	202	44.2	266	01.3	-22	06.6	91	21.4	+22	15.3				
7	217	46.7	281	00.4		06.1	106	24.2		15.3				
8	232	49.1	295	59.5		05.6	121	27.0		15.4				
9	247	51.6	310	58.6		05.1	136	29.9		15.4				
10	262	54.1	325	57.7		04.7	151	32.7		15.5				
11	277	56.5	340	56.8	-22	04.2	166	35.5	+22	15.5				
12	292	59.0	355	55.9	-22	03.7	181	38.3	+22	15.6				
13	308	01.4	10	55.1		03.2	196	41.2		15.6				
14	323	03.9	25	54.2		02.7	211	44.0		15.7				
15	338	06.4	40	53.3		02.2	226	46.8		15.7				
16	353	08.8	55	52.4		01.7	241	49.6		15.8				
17	8	11.3	70	51.5	-22	01.2	256	52.5	+22	15.9				
18	23	13.8	85	50.6	-22	00.7	271	55.3	+22	15.9				
19	38	16.2	100	49.7	-22	00.2	286	58.1		16.0				
20	53	18.7	115	48.9	-21	59.7	302	00.9		16.0				
21	68	21.2	130	48.0		59.2	317	03.7		16.1				
22	83	23.6	145	47.1		58.7	332	06.6		16.1				
23	98	26.1	160	46.2		58.2	347	09.4		16.2				
24	113	28.5	175	45.3	-21	57.7	2	12.2	+22	16.2				
Dif	—		-9		+5		+4		+1		+23		+1	

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG:12 ^h 09.0 ^m				Edad: 24.9 ^d SD: 14'7 PMG: 8 ^h 30 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1 R°: 52 ^m									
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	177	47.2	-21	20.4	236	36.3	-25	07.6	60 N	15 29	16 23	17 17	6 15 89	10 38 19		
1	192	47.0		19.9	251	07.0		14.5	58	44	32	23	5 48 80	11 05 28		
2	207	46.7		19.5	265	37.7		21.2	56	15 56	41	28	28 74	26 33		
3	222	46.5		19.1	280	08.3		27.8	54	16 07	49	34	5 11 71	44 35		
4	237	46.3		18.6	294	38.8		34.3	52	17	16 56	38	4 56 69	11 59 38		
5	252	46.1	-21	18.2	309	09.3	-25	40.6	50	16 25	17 02	17 43	4 43 67	12 12 39		
6	267	45.8	-21	17.7	323	39.7	-25	46.9	45	16 43	17 16	17 52	4 17 64	12 39 42		
7	282	45.6		17.3	338	10.1		53.0	40	16 58	28	18 01	3 57 61	13 00 45		
8	297	45.4		16.8	352	40.4	-25	59.1	35	17 11	38	09	39 60	18 46		
9	312	45.1		16.4	7	10.6	-26	05.0	30	22	17 47	17	25 58	33 47		
10	327	44.9		16.0	21	40.8		10.8	20	40	18 04	31	3 00 55	13 59 49		
11	342	44.7	-21	15.5	36	10.9	-26	16.4	10 N	17 57	18 20	18 46	2 38 54	14 21 51		
12	357	44.5	-21	15.1	50	40.9	-26	22.0	0	18 13	18 35	19 01	2 18 52	14 42 53		
13	12	44.2		14.6	65	10.9		27.4	10 S	28	18 51	18	1 59 49	15 03 54		
14	27	44.0		14.2	79	40.9		32.7	20	18 45	19 10	19 38	38 47	26 55		
15	42	43.8		13.7	94	10.7		37.9	30	19 05	32	20 04	1 13 45	15 52 57		
16	57	43.6		13.3	108	40.5		43.0	35	17	19 46	21	0 59 43	16 08 58		
17	72	43.3	-21	12.8	123	10.3	-26	47.9	40	19 30	20 02	20 41	0 42 41	16 26 59		
18	87	43.1	-21	12.4	137	40.0	-26	52.7	45	19 46	20 22	21 08	0 23 38	16 47 61		
19	102	42.9		11.9	152	09.7	-26	57.4	50	20 06	20 47	21 45	** ** *	17 15 63		
20	117	42.7		11.5	166	39.3	-27	02.0	52	15	21 00	22 06	** ** *	29 64		
21	132	42.4		11.0	181	08.8		06.4	54	25	15	22 33	** ** *	17 45 66		
22	147	42.2		10.5	195	38.3		10.7	56	37	32	23 16	23 42 41	18 03 69		
23	162	42.0		10.1	210	07.7		14.9	58	20 51	21 54	** ** *	23 19 38	26 72		
24	177	41.8	-21	09.6	224	37.1	-27	19.0	60 S	21 08	22 23	** ** *	22 49 30	18 56 80		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 16 ^h 23.4 ^m		Mag: -3.9 PMG: 12 ^h 18 ^m		Mag: +1.1 PMG: 12 ^h 05 ^m		Mag: -2.7 PMG: 23 ^h 47 ^m		Mag: +1.0 PMG: 16 ^h 16 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	113	28.5	175	45.3	-21	57.7	178	47.3	-22	28.7	2	12.2	+22	16.2	115	18.0	-3	12.5
1	128	31.0	190	44.4		57.2	193	47.7		28.4	17	15.0		16.3	130	20.3		12.4
2	143	33.5	205	43.6		56.6	208	48.1		28.1	32	17.9		16.3	145	22.6		12.4
3	158	35.9	220	42.7		56.1	223	48.5		27.8	47	20.7		16.4	160	24.9		12.3
4	173	38.4	235	41.8		55.6	238	48.9		27.5	62	23.5		16.4	175	27.1		12.2
5	188	40.9	250	40.9	-21	55.1	253	49.3	-22	27.2	77	26.3	+22	16.5	190	29.4	-3	12.1
6	203	43.3	265	40.0	-21	54.6	268	49.7	-22	26.9	92	29.1	+22	16.6	205	31.7	-3	12.0
7	218	45.8	280	39.2		54.1	283	50.1		26.6	107	32.0		16.6	220	34.0		11.9
8	233	48.3	295	38.3		53.6	298	50.5		26.2	122	34.8		16.7	235	36.3		11.9
9	248	50.7	310	37.4		53.0	313	50.9		25.9	137	37.6		16.7	250	38.6		11.8
10	263	53.2	325	36.5		52.5	328	51.3		25.6	152	40.4		16.8	265	40.9		11.7
11	278	55.7	340	35.6	-21	52.0	343	51.6	-22	25.3	167	43.2	+22	16.8	280	43.2	-3	11.6
12	293	58.1	355	34.8	-21	51.5	358	52.0	-22	25.0	182	46.1	+22	16.9	295	45.5	-3	11.5
13	309	00.6	10	33.9		51.0	13	52.4		24.7	197	48.9		16.9	310	47.7		11.4
14	324	03.0	25	33.0		50.4	28	52.8		24.4	212	51.7		17.0	325	50.0		11.3
15	339	05.5	40	32.1		49.9	43	53.2		24.0	227	54.5		17.0	340	52.3		11.3
16	354	08.0	55	31.3		49.4	58	53.6		23.7	242	57.4		17.1	355	54.6		11.2
17	9	10.4	70	30.4	-21	48.9	73	54.0	-22	23.4	258	00.2	+22	17.1	10	56.9	-3	11.1
18	24	12.9	85	29.5	-21	48.3	88	54.4	-22	23.1	273	03.0	+22	17.2	25	59.2	-3	11.0
19	39	15.4	100	28.6		47.8	103	54.8		22.8	288	05.8		17.3	41	01.5		10.9
20	54	17.8	115	27.8		47.3	118	55.2		22.5	303	08.6		17.3	56	03.8		10.8
21	69	20.3	130	26.9		46.8	133	55.6		22.1	318	11.5		17.4	71	06.0		10.8
22	84	22.8	145	26.0		46.2	148	56.0		21.8	333	14.3		17.4	86	08.3		10.7
23	99	25.2	160	25.1		45.7	163	56.4		21.5	348	17.1		17.5	101	10.6		10.6
24	114	27.7	175	24.3	-21	45.2	178	56.8	-22	21.2	3	19.9	+22	17.5	116	12.9	-3	10.5
Dif	—		-9		+5		+4		+3		+28		+1		+23		+1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'3 PMG:12 ^h 09.4 ^m				Edad: 25.9 ^d SD: 14'8 PMG: 9 ^h 21 ^m													
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico	Civil	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	177	41.8	-21	09.6	224	37.1	-27	19.0	60 N	7 01	7 55	8 48	7 42 65	10 56 43				
1	192	41.5		09.2	239	06.4		22.9	58	6 55	45	33	7 07 61	11 32 47				
2	207	41.3		08.7	253	35.7		26.7	56	49	37	21	6 41 60	11 57 49				
3	222	41.1		08.3	268	05.0		30.3	54	44	29	11	21 58	12 18 49				
4	237	40.9		07.8	282	34.1		33.9	52	40	22	8 01	6 04 57	35 50				
5	252	40.7	-21	07.3	297	03.3	-27	37.3	50	6 35	7 16	7 53	5 49 57	12 50 50				
6	267	40.4	-21	06.9	311	32.4	-27	40.6	45	6 26	7 02	7 35	5 19 57	13 20 51				
7	282	40.2		06.4	326	01.4		43.7	40	17	6 50	20	4 56 56	13 43 52				
8	297	40.0		06.0	340	30.4		46.7	35	09	40	7 08	37 55	14 02 52				
9	312	39.8		05.5	354	59.4		49.6	30	6 01	31	6 57	4 21 54	19 52				
10	327	39.6		05.0	9	28.3		52.3	20	5 47	6 14	38	3 54 53	14 47 52				
11	342	39.3	-21	04.6	23	57.2	-27	54.9	10 N	5 33	5 59	6 21	3 30 53	15 11 52				
12	357	39.1	-21	04.1	38	26.0	-27	57.4	0	5 18	5 44	6 06	3 08 52	15 33 53				
13	12	38.9		03.6	52	54.8	-27	59.7	10 S	5 01	27	5 50	2 47 51	15 56 52				
14	27	38.7		03.2	67	23.6	-28	01.9	20	4 40	5 09	33	2 23 50	16 20 52				
15	42	38.5		02.7	81	52.3		04.0	30	4 14	4 47	14	1 56 49	16 48 52				
16	57	38.2		02.2	96	21.0		05.9	35	3 58	33	5 02	40 49	17 04 53				
17	72	38.0	-21	01.8	110	49.6	-28	07.7	40	3 37	4 17	4 49	1 22 47	17 24 52				
18	87	37.8	-21	01.3	125	18.2	-28	09.3	45	3 11	3 57	4 33	0 59 47	17 47 52				
19	102	37.6		00.8	139	46.8		10.8	50	2 34	32	13	31 44	18 17 52				
20	117	37.4	-21	00.4	154	15.4		12.2	52	2 13	19	4 04	17 43	32 52				
21	132	37.1	-20	59.9	168	43.9		13.4	54	1 46	3 04	3 53	0 01 42	18 49 52				
22	147	36.9		59.4	183	12.4		14.5	56	1 03	2 47	42	** ** *	19 10 51				
23	162	36.7		59.0	197	40.9		15.5	58	** ** *	2 25	28	23 55 60	19 37 50				
24	177	36.5	-20	58.5	212	09.3	-28	16.3	60 S	** ** *	1 56	3 11	23 18 62	20 14 48				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 19.5 ^m		Mag: -3.9 PMG: 12 ^h 19 ^m		Mag: +1.1 PMG: 12 ^h 04 ^m		Mag: -2.7 PMG: 23 ^h 42 ^m		Mag: +1.0 PMG: 16 ^h 13 ^m	
	hG ♊	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	114	27.7	175	24.3	-21	45.2	178	56.8	-22	21.2
1	129	30.2	190	23.4		44.6	193	57.2		20.9
2	144	32.6	205	22.5		44.1	208	57.6		20.5
3	159	35.1	220	21.7		43.5	223	58.0		20.2
4	174	37.5	235	20.8		43.0	238	58.4		19.9
5	189	40.0	250	19.9	-21	42.5	253	58.8	-22	19.6
6	204	42.5	265	19.0	-21	41.9	268	59.2	-22	19.3
7	219	44.9	280	18.2		41.4	283	59.6		18.9
8	234	47.4	295	17.3		40.8	299	00.0		18.6
9	249	49.9	310	16.4		40.3	314	00.4		18.3
10	264	52.3	325	15.6		39.7	329	00.8		18.0
11	279	54.8	340	14.7	-21	39.2	344	01.2	-22	17.6
12	294	57.3	355	13.8	-21	38.6	359	01.6	-22	17.3
13	309	59.7	10	13.0		38.1	14	02.0		17.0
14	325	02.2	25	12.1		37.5	29	02.4		16.7
15	340	04.7	40	11.2		37.0	44	02.8		16.3
16	355	07.1	55	10.4		36.4	59	03.2		16.0
17	10	09.6	70	09.5	-21	35.9	74	03.6	-22	15.7
18	25	12.0	85	08.6	-21	35.3	89	04.0	-22	15.4
19	40	14.5	100	07.8		34.8	104	04.4		15.0
20	55	17.0	115	06.9		34.2	119	04.8		14.7
21	70	19.4	130	06.1		33.7	134	05.2		14.4
22	85	21.9	145	05.2		33.1	149	05.6		14.0
23	100	24.4	160	04.3		32.5	164	06.0		13.7
24	115	26.8	175	03.5	-21	32.0	179	06.4	-22	13.4
Dif	—		-9		+5		+4		+3	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG:12 ^h 09.7 ^m				Edad: 26.9 ^d SD: 14'8 PMG: 10 ^h 13 ^m														
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	177	36.5	-20	58.5	212	09.3	-28	16.3	7	17.0	60 N	15 34	16 26	17 20	8 47	33	11 39	80	
1	192	36.3		58.0	226	37.7		17.0	5	17.5	58	15 48	36	26	8 08	40	12 19	72	
2	207	36.1		57.5	241	06.1		17.5	4	17.9	56	16 00	44	32	7 41	43	12 46	69	
3	222	35.9		57.1	255	34.5		17.9	2	18.1	54	10	52	36	19 45	13 07	66		
4	237	35.6		56.6	270	02.8		18.1	1	18.2	52	20	16 59	41	7 01	47	25	65	
5	252	35.4	-20	56.1	284	31.2	-28	18.2	0	18.0	50	16 28	17 05	17 45	6 46	48	13 40	64	
6	267	35.2	-20	55.6	298	59.5	-28	18.2	2	17.7	45	16 46	17 18	17 55	6 16	49	14 11	62	
7	282	35.0		55.2	313	27.8		18.0	3	17.3	40	17 00	30	18 03	5 52	50	35	60	
8	297	34.8		54.7	327	56.1		17.7	4	17.3	35	12	40	11	32	51	14 54	59	
9	312	34.6		54.2	342	24.3		17.3	7	16.6	30	23	17 49	18	5 15	52	15 11	58	
10	327	34.4		53.7	356	52.6		16.6	7	15.9	20	42	18 05	32	4 47	53	15 39	57	
11	342	34.1	-20	53.2	11	20.8	-28	15.9	9	15.0	10 N	17 58	18 20	18 46	4 23	53	16 03	55	
12	357	33.9	-20	52.8	25	49.1	-28	15.0	10	14.0	0	18 13	18 36	19 01	4 00	54	16 26	54	
13	12	33.7		52.3	40	17.3		14.0	12	12.8	10 S	29	18 51	18	3 38	54	16 48	53	
14	27	33.5		51.8	54	45.5		12.8	13	11.5	20	18 45	19 10	19 38	3 13	56	17 12	51	
15	42	33.3		51.3	69	13.7		11.5	15	10.0	30	19 05	31	20 04	2 45	56	40	49	
16	57	33.1		50.8	83	41.9		10.0	16	08.4	35	16	19 45	20	29	56	17 57	48	
17	72	32.9	-20	50.3	98	10.1	-28	08.4	17	06.7	40	19 29	20 01	20 40	2 09	57	18 16	46	
18	87	32.7	-20	49.9	112	38.3	-28	06.7	19	04.8	45	19 45	20 20	21 06	1 46	57	18 39	45	
19	102	32.4		49.4	127	06.5		04.8	21	02.7	50	20 04	45	21 42	15	59	19 09	42	
20	117	32.2		48.9	141	34.7		02.7	21	00.6	52	13	20 58	22 02	1 00	59	24	40	
21	132	32.0		48.4	156	02.9	-28	00.6	24	58.2	54	23	21 12	22 27	0 43	59	19 41	38	
22	147	31.8		47.9	170	31.1	-27	58.2	24	55.8	56	35	29	23 05	0 22	60	20 01	35	
23	162	31.6		47.4	184	59.3		55.8	26	53.2	58	20 48	21 50	** **	** **	** **	20 27	30	
24	177	31.4	-20	46.9	199	27.6	-27	53.2			60 S	21 04	22 17	** **	** **	** **	21 02	22	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 15.5 ^m		Mag: -3.9 PMG: 12 ^h 20 ^m		Mag: +1.1 PMG: 12 ^h 03 ^m		Mag: -2.7 PMG: 23 ^h 38 ^m		Mag: +1.0 PMG: 16 ^h 09 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	115	26.8	175	03.5	-21	32.0	179	06.4	-22	13.4
1	130	29.3	190	02.6		31.4	194	06.8		13.1
2	145	31.8	205	01.7		30.9	209	07.2		12.7
3	160	34.2	220	00.9		30.3	224	07.6		12.4
4	175	36.7	235	00.0		29.7	239	08.0		12.1
5	190	39.2	249	59.2	-21	29.2	254	08.4	-22	11.7
6	205	41.6	264	58.3	-21	28.6	269	08.8	-22	11.4
7	220	44.1	279	57.4		28.0	284	09.2		11.1
8	235	46.5	294	56.6		27.5	299	09.6		10.7
9	250	49.0	309	55.7		26.9	314	10.0		10.4
10	265	51.5	324	54.9		26.3	329	10.4		10.1
11	280	53.9	339	54.0	-21	25.7	344	10.8	-22	09.7
12	295	56.4	354	53.2	-21	25.2	359	11.2	-22	09.4
13	310	58.9	9	52.3		24.6	14	11.6		09.1
14	326	01.3	24	51.5		24.0	29	12.0		08.7
15	341	03.8	39	50.6		23.4	44	12.4		08.4
16	356	06.3	54	49.7		22.8	59	12.8		08.1
17	11	08.7	69	48.9	-21	22.3	74	13.2	-22	07.7
18	26	11.2	84	48.0	-21	21.7	89	13.6	-22	07.4
19	41	13.7	99	47.2		21.1	104	14.0		07.0
20	56	16.1	114	46.3		20.5	119	14.4		06.7
21	71	18.6	129	45.5		19.9	134	14.8		06.4
22	86	21.0	144	44.6		19.3	149	15.2		06.0
23	101	23.5	159	43.8		18.8	164	15.6		05.7
24	116	26.0	174	42.9	-21	18.2	179	16.0	-22	05.3
Dif	—		-9		+6		+4		+3	
							+28		+1	
									+23	
									+1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 3 PMG: 12 ^h 10.1 ^m				Edad: 27.9 ^d PHE { 4 ^h : 54 ^h 8 12 ^h : 54 ^h 9 20 ^h : 55 ^h 0 R°: 51 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°		Hora	R°				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	177	31.4	-20	46.9	199	27.6	-27	53.2	28	60 N	6 59	7 52	8 44	9 19	12	12 58	96	
1	192	31.2		46.4	213	55.8		50.4	28	58	53	43	31	8 46	21	13 30	86	
2	207	31.0		45.9	228	24.0		47.5	29	56	48	35	19	22	27	13 54	80	
3	222	30.8		45.5	242	52.3		44.5	30	54	43	27	8 08	8 03	30	14 13	71	
4	237	30.6		45.0	257	20.5		41.3	32	52	38	20	7 59	7 46	33	29	74	
5	252	30.4	-20	44.5	271	48.8	-27	38.0	33	50	6 34	7 14	7 51	7 32	35	14 43	72	
6	267	30.2	-20	44.0	286	17.1	-27	34.5	35	45	6 25	7 01	7 33	7 03	39	15 11	68	
7	282	29.9		43.5	300	45.4		30.9	36	40	16	6 50	19	6 41	41	34	64	
8	297	29.7		43.0	315	13.7		27.2	37	35	09	40	7 07	22	44	15 52	62	
9	312	29.5		42.5	329	42.0		23.3	39	30	6 01	31	6 56	6 06	45	16 08	60	
10	327	29.3		42.0	344	10.4		19.2	41	20	5 47	6 14	38	5 38	48	34	57	
11	342	29.1	-20	41.5	358	38.7	-27	15.1	41	10 N	5 33	5 59	6 22	5 15	50	16 57	54	
12	357	28.9	-20	41.0	13	07.1	-27	10.8	43	0	5 19	5 44	6 06	4 53	52	17 18	52	
13	12	28.7		40.5	27	35.6		06.3	45	10 S	5 02	28	5 51	31	54	17 39	49	
14	27	28.5		40.0	42	04.0	-27	01.7	46	20	4 42	5 10	34	4 07	56	18 02	46	
15	42	28.3		39.5	56	32.5	-26	57.0	47	30	16	4 49	15	3 40	58	28	43	
16	57	28.1		39.0	71	01.0		52.1	49	35	4 00	35	5 04	24	60	18 43	41	
17	72	27.9	-20	38.5	85	29.5	-26	47.1	50	40	3 40	4 19	4 51	3 05	62	19 01	38	
18	87	27.7	-20	38.0	99	58.0	-26	42.0	51	45	3 14	4 00	4 35	2 42	64	19 22	35	
19	102	27.5		37.5	114	26.6		36.7	53	50	2 38	3 35	16	2 12	68	19 49	30	
20	117	27.3		37.0	128	55.2		31.3	54	52	2 19	23	4 07	1 58	69	20 02	28	
21	132	27.1		36.5	143	23.9		25.7	56	54	1 53	3 08	3 57	41	72	17	25	
22	147	26.9		36.0	157	52.5		20.0	57	56	1 15	2 51	45	1 20	75	35	21	
23	162	26.7		35.5	172	21.2		14.2	58	58	** **	31	32	0 55	80	20	56	16
24	177	26.5	-20	35.0	186	50.0	-26	08.2	60	60 S	** **	2 03	3 16	0 20	88	21 23	8	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 11.6 ^m		Mag: -3.9 PMG: 12 ^h 22 ^m		Mag: +1.1 PMG: 12 ^h 03 ^m		Mag: -2.7 PMG: 23 ^h 33 ^m		Mag: +1.0 PMG: 16 ^h 05 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	116	26.0	174	42.9	-21	18.2	179	16.0	-22	05.3
1	131	28.4	189	42.1		17.6	194	16.4		05.0
2	146	30.9	204	41.2		17.0	209	16.8		04.7
3	161	33.4	219	40.4		16.4	224	17.2		04.3
4	176	35.8	234	39.5		15.8	239	17.6		04.0
5	191	38.3	249	38.7	-21	15.2	254	18.0	-22	03.6
6	206	40.8	264	37.8	-21	14.6	269	18.4	-22	03.3
7	221	43.2	279	37.0		14.0	284	18.8		02.9
8	236	45.7	294	36.1		13.4	299	19.2		02.6
9	251	48.1	309	35.3		12.8	314	19.6		02.3
10	266	50.6	324	34.4		12.2	329	20.0		01.9
11	281	53.1	339	33.6	-21	11.6	344	20.4	-22	01.6
12	296	55.5	354	32.7	-21	11.0	359	20.8	-22	01.2
13	311	58.0	9	31.9		10.4	14	21.2		00.9
14	327	00.5	24	31.1		09.8	29	21.7		00.5
15	342	02.9	39	30.2		09.2	44	22.1	-22	00.2
16	357	05.4	54	29.4		08.6	59	22.5	-21	59.8
17	12	07.9	69	28.5	-21	08.0	74	22.9	-21	59.5
18	27	10.3	84	27.7	-21	07.4	89	23.3	-21	59.1
19	42	12.8	99	26.8		06.8	104	23.7		58.8
20	57	15.3	114	26.0		06.2	119	24.1		58.4
21	72	17.7	129	25.2		05.6	134	24.5		58.1
22	87	20.2	144	24.3		05.0	149	24.9		57.7
23	102	22.6	159	23.5		04.3	164	25.3		57.4
24	117	25.1	174	22.6	-21	03.7	179	25.7	-21	57.0
Dif	—		-8		+6		+4		+3	
							+28		+1	
									+23	
									+1	

UT	SOL			● LUNA					Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3 PMG: 12 ^h 10.4 ^m			Edad: 28.9 ^d SD: 15 ^h 0 PMG: 11 ^h 57 ^m PHE { 4 ^h : 55 ^h 2 12 ^h : 55 ^h 3 20 ^h : 55 ^h 5 R°: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Civil			Náutico	Hora R°	Hora R°					
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	h m	h m	h m	h m		
0	177	26.5	-20	35.0	186	50.0	-26	08.2	61	60 N	15 39	16 30	17 24	9 31	5	14 34	100	
1	192	26.3		34.5	201	18.8	98	-26	02.1	61	58	15 52	40	30	9 07	13	14 56	93
2	207	26.1		34.0	215	47.6	98	-25	55.9	62	56	16 04	48	35	8 49	17	15 14	88
3	222	25.9		33.5	230	16.4	98		49.5	64	54	14	16 55	39	33	22	30	84
4	237	25.7		32.9	244	45.3	99		43.0	65	52	23	17 02	44	19	25	43	80
5	252	25.5	-20	32.4	259	14.3	100	-25	36.4	66	50	16 31	17 08	17 48	8 07	28	15 55	77
6	267	25.3	-20	31.9	273	43.2	99	-25	29.6	68	45	16 48	17 21	17 57	7 42	33	16 19	72
7	282	25.1		31.4	288	12.2	100		22.7	69	40	17 02	32	18 05	22	36	38	68
8	297	24.9		30.9	302	41.3	101		15.7	70	35	14	42	13	7 06	39	16 54	65
9	312	24.7		30.4	317	10.4	101		08.5	72	30	25	17 51	20	6 51	41	17 08	62
10	327	24.5		29.9	331	39.5	101	-25	01.2	73	20	43	18 07	34	26	46	31	58
11	342	24.3	-20	29.4	346	08.7	102	-24	53.8	74	10 N	17 59	18 21	18 47	6 05	49	17 51	54
12	357	24.1	-20	28.9	0	38.0	103	-24	46.2	76	0	18 14	18 36	19 02	5 45	52	18 10	50
13	12	23.9		28.3	15	07.2	102		38.6	76	10 S	29	18 52	18	25	55	28	47
14	27	23.7		27.8	29	36.6	104		30.8	78	20	18 45	19 09	19 38	5 03	59	18 48	43
15	42	23.5		27.3	44	05.9	103		22.8	80	30	19 04	31	20 03	4 38	63	19 11	39
16	57	23.3		26.8	58	35.3	104		14.8	80	35	15	44	19	24	64	24	36
17	72	23.1	-20	26.3	73	04.8	105	-24	06.6	82	40	19 28	19 59	20 38	4 07	67	19 39	33
18	87	22.9	-20	25.8	87	34.3	105	-23	58.3	83	45	19 43	20 18	21 04	3 46	71	19 57	29
19	102	22.7		25.2	102	03.9	106		49.9	84	50	20 02	43	39	20	76	20 19	24
20	117	22.5		24.7	116	33.5	106		41.3	86	52	11	20 55	21 57	3 07	79	30	22
21	132	22.3		24.2	131	03.1	106		32.7	86	54	21	21 09	22 22	2 53	81	42	18
22	147	22.1		23.7	145	32.9	108		23.9	88	56	32	25	22 56	35	86	20 56	14
23	162	21.9		23.2	160	02.6	107		15.0	89	58	20 45	21 45	** **	2 15	91	21 12	10
24	177	21.7	-20	22.6	174	32.4	108	-23	05.9	91	60 S	21 00	22 11	** **	1 48	99	21 31	4
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 16 ^h 07.7 ^m		Mag: -3.9 PMG: 12 ^h 23 ^m			Mag: +1.1 PMG: 12 ^h 02 ^m			Mag: -2.7 PMG: 23 ^h 29 ^m			Mag: +1.0 PMG: 16 ^h 02 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	° /		° /	° /		° /	° /		° /	° /		° /	° /					
0	117	25.1	174	22.6	-21	03.7	179	25.7	-21	57.0	6	42.9	+22	21.3				
1	132	27.6	189	21.8		03.1	194	26.1		56.7	21	45.7		21.4				
2	147	30.0	204	21.0		02.5	209	26.5		56.3	36	48.5		21.4				
3	162	32.5	219	20.1		01.9	224	26.9		56.0	51	51.3		21.5				
4	177	35.0	234	19.3		01.3	239	27.3		55.6	66	54.2		21.5				
5	192	37.4	249	18.4	-21	00.6	254	27.7	-21	55.3	81	57.0	+22	21.6				
6	207	39.9	264	17.6	-21	00.0	269	28.1	-21	54.9	96	59.8	+22	21.6				
7	222	42.4	279	16.8	-20	59.4	284	28.5		54.6	112	02.6		21.7				
8	237	44.8	294	15.9		58.8	299	28.9		54.2	127	05.4		21.7				
9	252	47.3	309	15.1		58.1	314	29.3		53.9	142	08.2		21.8				
10	267	49.8	324	14.3		57.5	329	29.8		53.5	157	11.1		21.8				
11	282	52.2	339	13.4	-20	56.9	344	30.2	-21	53.2	172	13.9	+22	21.9				
12	297	54.7	354	12.6	-20	56.3	359	30.6	-21	52.8	187	16.7	+22	21.9				
13	312	57.1	9	11.8		55.6	14	31.0		52.4	202	19.5		22.0				
14	327	59.6	24	10.9		55.0	29	31.4		52.1	217	22.3		22.0				
15	343	02.1	39	10.1		54.4	44	31.8		51.7	232	25.1		22.1				
16	358	04.5	54	09.3		53.7	59	32.2		51.4	247	28.0		22.1				
17	13	07.0	69	08.4	-20	53.1	74	32.6	-21	51.0	262	30.8	+22	22.2				
18	28	09.5	84	07.6	-20	52.5	89	33.0	-21	50.7	277	33.6	+22	22.2				
19	43	11.9	99	06.8		51.8	104	33.4		50.3	292	36.4		22.3				
20	58	14.4	114	05.9		51.2	119	33.8		49.9	307	39.2		22.3				
21	73	16.9	129	05.1		50.6	134	34.2		49.6	322	42.0		22.4				
22	88	19.3	144	04.3		49.9	149	34.6		49.2	337	44.8		22.4				
23	103	21.8	159	03.5		49.3	164	35.0		48.9	352	47.7		22.5				
24	118	24.3	174	02.6	-20	48.6	179	35.4	-21	48.5	7	50.5	+22	22.5				
Dif	—		-8		+6	+4		+4		+28		+1		+23				

UT	SOL				● LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 16'3 PMG:12 ^h 10.7 ^m				Edad: 0.2 ^d PHE { 4 ^h : 55'6 12 ^h : 55'8 20 ^h : 55'9 Rº: 48 ^m																			
	hG ☉	Dec			hG ☾	Dif			Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº						
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m			
0	177	21.7	-20	22.6	174	32.4	-23	05.9	91	60 N	6 56	7 50	8 41	9 35	1	16	12	97						
1	192	21.5		22.1	189	02.3	-22	56.8	93	58	51	40	28	19	7		28	91						
2	207	21.3		21.6	203	32.2		47.5	94	56	46	32	16	9	05	11	41	87						
3	222	21.1		21.1	218	02.2		38.1	95	54	41	25	8 06	8 53	15	16	52	83						
4	237	21.0		20.5	232	32.2		28.6	96	52	37	19	7 57	43	17	17	02	80						
5	252	20.8	-20	20.0	247	02.3	-22	19.0	95	50	6 33	7 13	7 49	8 33	20	17	11	77						
6	267	20.6	-20	19.5	261	32.4	-22	09.3	97	45	6 24	7 00	7 32	8 13	25	17	30	71						
7	282	20.4		19.0	276	02.6	-21	59.5	98	40	16	6 49	18	7 57	29	45	67							
8	297	20.2		18.4	290	32.8		49.5	100	35	08	39	7 06	43	33	17	57	64						
9	312	20.0		17.9	305	03.1		39.4	101	30	6 01	30	6 56	31	36	18	09	60						
10	327	19.8		17.4	319	33.4		29.3	101	20	5 47	14	38	7 10	41	27	56							
11	342	19.6	-20	16.9	334	03.8	-21	19.0	103	10 N	5 34	6 00	6 22	6 52	45	18	44	51						
12	357	19.4	-20	16.3	348	34.3	-21	08.6	104	0	5 19	5 45	6 07	6 35	49	18	59	47						
13	12	19.2		15.8	3	04.8	-20	58.1	105	10 S	5 03	29	5 52	19	52	19	14	43						
14	27	19.0		15.3	17	35.3		47.5	106	20	4 44	5 12	36	6 00	56	30	39							
15	42	18.9		14.7	32	05.9		36.8	107	30	18	4 50	17	5 39	61	48	34							
16	57	18.7		14.2	46	36.6		26.0	108	35	4 03	37	5 06	27	64	19	59	30						
17	72	18.5	-20	13.7	61	07.3	-20	15.1	109	40	3 43	4 22	4 53	5 12	68	20	11	27						
18	87	18.3	-20	13.1	75	38.1	-20	04.0	111	45	3 18	4 03	4 38	4 55	72	20	25	23						
19	102	18.1		12.6	90	08.9	-19	52.9	111	50	2 43	3 39	20	34	77	42	18							
20	117	17.9		12.1	104	39.8		41.7	112	52	24	27	11	24	80	50	15							
21	132	17.7		11.5	119	10.7		30.4	113	54	2 00	3 13	4 01	13	83	20	59	13						
22	147	17.5		11.0	133	41.7		18.9	115	56	1 26	2 56	3 50	4 00	86	21	09	9						
23	162	17.4		10.5	148	12.7	-19	07.4	115	58	** **	36	37	3 44	92	20	6							
24	177	17.2	-20	09.9	162	43.8	-18	55.8	116	60 S	** **	2 11	3 21	3 26	98	21	34	0						
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG 16 ^h 03.7 ^m			Mag: -3.9 PMG: 12 ^h 25 ^m			Mag: +1.0 PMG: 12 ^h 01 ^m			Mag: -2.7 PMG: 23 ^h 24 ^m			Mag: +1.0 PMG: 15 ^h 58 ^m											
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	118	24.3	174	02.6	-20	48.6	179	35.4	-21	48.5	7	50.5	+22	22.5	119	51.9	-3	02.2						
1	133	26.7	189	01.8		48.0	194	35.9		48.1	22	53.3		22.6	134	54.1		02.1						
2	148	29.2	204	01.0		47.4	209	36.3		47.8	37	56.1		22.6	149	56.4		02.0						
3	163	31.6	219	00.2		46.7	224	36.7		47.4	52	58.9		22.7	164	58.7		01.9						
4	178	34.1	233	59.3		46.1	239	37.1		47.1	68	01.7		22.7	180	00.9		01.8						
5	193	36.6	248	58.5	-20	45.4	254	37.5	-21	46.7	83	04.5	+22	22.8	195	03.2	-3	01.7						
6	208	39.0	263	57.7	-20	44.8	269	37.9	-21	46.3	98	07.4	+22	22.8	210	05.5	-3	01.6						
7	223	41.5	278	56.8		44.1	284	38.3		46.0	113	10.2		22.9	225	07.8		01.5						
8	238	44.0	293	56.0		43.5	299	38.7		45.6	128	13.0		22.9	240	10.0		01.4						
9	253	46.4	308	55.2		42.8	314	39.1		45.2	143	15.8		23.0	255	12.3		01.3						
10	268	48.9	323	54.4		42.2	329	39.5		44.9	158	18.6		23.0	270	14.6		01.3						
11	283	51.4	338	53.6	-20	41.5	344	39.9	-21	44.5	173	21.4	+22	23.1	285	16.9	-3	01.2						
12	298	53.8	353	52.7	-20	40.9	359	40.3	-21	44.1	188	24.2	+22	23.1	300	19.1	-3	01.1						
13	313	56.3	8	51.9		40.2	14	40.8		43.8	203	27.0		23.2	315	21.4		01.0						
14	328	58.8	23	51.1		39.6	29	41.2		43.4	218	29.9		23.2	330	23.7		00.9						
15	344	01.2	38	50.3		38.9	44	41.6		43.0	233	32.7		23.3	345	26.0		00.8						
16	359	03.7	53	49.5		38.3	59	42.0		42.7	248	35.5		23.3	0	28.2		00.7						
17	14	06.1	68	48.6	-20	37.6	74	42.4	-21	42.3	263	38.3	+22	23.4	15	30.5	-3	00.6						
18	29	08.6	83	47.8	-20	36.9	89	42.8	-21	41.9	278	41.1	+22	23.4	30	32.8	-3	00.5						
19	44	11.1	98	47.0		36.3	104	43.2		41.6	293	43.9		23.5	45	35.0		00.4						
20	59	13.5	113	46.2		35.6	119	43.6		41.2	308	46.7		23.5	60	37.3		00.4						
21	74	16.0	128	45.4		34.9	134	44.0		40.8	323	49.5		23.6	75	39.6		00.3						
22	89	18.5	143	44.5		34.3	149	44.4		40.5	338	52.4		23.7	90	41.9		00.2						
23	104	20.9	158	43.7		33.6	164	44.9		40.1	353	55.2		23.7	105	44.1	-3	00.1						
24	119	23.4	173	42.9	-20	33.0	179	45.3	-21	39.7	8	58.0	+22	23.8	120	46.4	-3	00.0						
Dif	—			-8			+7			+4			+28			+1			+23			+1		

UT	SOL			● LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h /3 PMG: 12 ^h 11.0 ^m			Edad: 1.2 ^d PHE { 4 ^h : 56 ^h /1 12 ^h : 56 ^h /2 20 ^h : 56 ^h /4 PMG: 13 ^h 35 ^m R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /	° /		° /		°	h m	h m	h m	h m m	h m m	h m m		
0	177	17.2	-20 09.9	162	43.8	-18 55.8	117	60 N	15 43	16 35	17 28	9 36 2	17 49 96			
1	192	17.0	09.4	177	14.9	44.1	117	58	15 57	43	33	26 5	17 59 91			
2	207	16.8	08.8	191	46.1	32.3	118	56	16 08	51	38	16 9	18 08 87			
3	222	16.6	08.3	206	17.4	20.4	119	54	18	16 58	42	08 12	15 85			
4	237	16.4	07.8	220	48.6	-18 08.4	120	52	26	17 05	47	9 00 15	22 81			
5	252	16.2	-20 07.2	235	20.0	-17 56.3	121	50	16 34	17 11	17 51	8 53 18	18 28 79			
6	267	16.1	-20 06.7	249	51.4	-17 44.1	122	45	16 51	17 23	17 59	8 38 23	18 41 74			
7	282	15.9	06.1	264	22.8	31.9	122	40	17 05	34	18 07	26 27	18 52 69			
8	297	15.7	05.6	278	54.3	19.5	124	35	16	44	15	16 30	19 01 65			
9	312	15.5	05.0	293	25.8	-17 07.1	124	30	27	17 52	21	8 07 33	09 62			
10	327	15.3	04.5	307	57.4	-16 54.5	126	20	17 44	18 08	35	7 51 38	23 56			
11	342	15.1	-20 04.0	322	29.1	-16 41.9	126	10 N	18 00	18 22	18 48	7 37 43	19 35 51			
12	357	15.0	-20 03.4	337	00.8	-16 29.2	127	0	18 15	18 37	19 02	7 24 47	19 46 47			
13	12	14.8	02.9	351	32.5	16.4	128	10 S	29	18 52	18	7 11 51	19 57 42			
14	27	14.6	02.3	6	04.3	-16 03.6	128	20	18 45	19 09	19 37	6 56 57	20 09 37			
15	42	14.4	01.8	20	36.1	-15 50.6	130	30	19 04	30	20 02	40 62	22 32			
16	57	14.2	01.2	35	08.0	37.6	130	35	15	43	18	31 65	29 29			
17	72	14.0	-20 00.7	49	39.9	-15 24.5	131	40	19 27	19 58	20 37	6 20 69	20 38 25			
18	87	13.9	-20 00.1	64	11.8	-15 11.3	132	45	19 42	20 17	21 01	6 07 73	20 48 21			
19	102	13.7	-19 59.6	78	43.8	-14 58.0	133	50	20 00	40	35	5 51 79	21 00 16			
20	117	13.5	59.0	93	15.9	44.7	133	52	09	20 52	21 53	44 81	05 14			
21	132	13.3	58.5	107	48.0	31.3	134	54	18	21 05	22 16	36 84	12 11			
22	147	13.1	57.9	122	20.1	17.8	135	56	29	21	22 47	26 88	18 9			
23	162	13.0	57.4	136	52.3	-14 04.2	136	58	42	21 40	** **	16 92	26 5			
24	177	12.8	-19 56.8	151	24.5	-13 50.6	136	60 S	20 56	22 05	** **	5 04 96	21 34 1			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 15 ^h 59.8 ^m		Mag: -3.9 PMG: 12 ^h 26 ^m			Mag: +1.1 PMG: 12 ^h 01 ^m			Mag: -2.7 PMG: 23 ^h 20 ^m			Mag: +1.0 PMG: 15 ^h 54 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /				
0	119	23.4	173 42.9	-20 33.0	179 45.3	-21 39.7	8 58.0	+22 23.8	120 46.4	-3 00.0						
1	134	25.9	188 42.1	32.3	194 45.7	39.3	24 00.8	23.8	135 48.7	-2 59.9						
2	149	28.3	203 41.3	31.6	209 46.1	39.0	39 03.6	23.9	150 51.0	59.8						
3	164	30.8	218 40.5	30.9	224 46.5	38.6	54 06.4	23.9	165 53.2	59.7						
4	179	33.2	233 39.6	30.3	239 46.9	38.2	69 09.2	24.0	180 55.5	59.6						
5	194	35.7	248 38.8	-20 29.6	254 47.3	-21 37.9	84 12.0	+22 24.0	195 57.8	-2 59.5						
6	209	38.2	263 38.0	-20 28.9	269 47.7	-21 37.5	99 14.9	+22 24.1	211 00.0	-2 59.4						
7	224	40.6	278 37.2	28.3	284 48.1	37.1	114 17.7	24.1	226 02.3	59.4						
8	239	43.1	293 36.4	27.6	299 48.6	36.7	129 20.5	24.2	241 04.6	59.3						
9	254	45.6	308 35.6	26.9	314 49.0	36.4	144 23.3	24.2	256 06.9	59.2						
10	269	48.0	323 34.8	26.2	329 49.4	36.0	159 26.1	24.3	271 09.1	59.1						
11	284	50.5	338 34.0	-20 25.6	344 49.8	-21 35.6	174 28.9	+22 24.3	286 11.4	-2 59.0						
12	299	53.0	353 33.2	-20 24.9	359 50.2	-21 35.2	189 31.7	+22 24.4	301 13.7	-2 58.9						
13	314	55.4	8 32.3	24.2	14 50.6	34.9	204 34.5	24.4	316 15.9	58.8						
14	329	57.9	23 31.5	23.5	29 51.0	34.5	219 37.3	24.5	331 18.2	58.7						
15	345	00.4	38 30.7	22.8	44 51.4	34.1	234 40.1	24.5	346 20.5	58.6						
16	0	02.8	53 29.9	22.2	59 51.8	33.7	249 43.0	24.6	1 22.7	58.5						
17	15	05.3	68 29.1	-20 21.5	74 52.3	-21 33.3	264 45.8	+22 24.6	16 25.0	-2 58.4						
18	30	07.7	83 28.3	-20 20.8	89 52.7	-21 33.0	279 48.6	+22 24.7	31 27.3	-2 58.4						
19	45	10.2	98 27.5	20.1	104 53.1	32.6	294 51.4	24.7	46 29.6	58.3						
20	60	12.7	113 26.7	19.4	119 53.5	32.2	309 54.2	24.8	61 31.8	58.2						
21	75	15.1	128 25.9	18.7	134 53.9	31.8	324 57.0	24.8	76 34.1	58.1						
22	90	17.6	143 25.1	18.0	149 54.3	31.4	339 59.8	24.9	91 36.4	58.0						
23	105	20.1	158 24.3	17.3	164 54.7	31.1	355 02.6	24.9	106 38.6	57.9						
24	120	22.5	173 23.5	-20 16.7	179 55.2	-21 30.7	10 05.4	+22 25.0	121 40.9	-2 57.8						
Dif	—		-8 +7		+4 +4		+28 0		+23 +1							

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 16'3 PMG:12 ^h 11.3 ^m				Edad: 2.2 ^d SD: 15'4 PMG: 14 ^h 21 ^m																	
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m			
0	177	12.8	-19	56.8	151	24.5	-13	50.6	137	60 N	6	54	7	47	8	37	9	36	0	19	23	93
1	192	12.6		56.3	165	56.7		36.9	138	58	48	38		24	30	3	29	89				
2	207	12.4		55.7	180	29.0		23.1	138	56	44	30		13	24	6	34	85				
3	222	12.3		55.1	195	01.4	-13	09.3	138	54	39	23	8	04	18	9	38	82				
4	237	12.1		54.6	209	33.7	-12	55.4	139	52	35	17	7	55	14	11	42	79				
5	252	11.9	-19	54.0	224	06.1	-12	41.4	140	50	6	31	7	11	9	09	14	76				
6	267	11.7	-19	53.5	238	38.6	-12	27.3	141	45	6	22	6	58	9	00	19	72				
7	282	11.5		52.9	253	11.1	-12	13.2	141	40	15	48	17		8	52	23	19	59	68		
8	297	11.4		52.4	267	43.6	-11	59.0	142	35	07	38	7	05	45	26	20	05	63			
9	312	11.2		51.8	282	16.1		44.8	142	30	6	01	30	6	55	39	30	10	60			
10	327	11.0		51.2	296	48.7		30.5	143	20	5	47	14	38	28	35	18	54				
11	342	10.8	-19	50.7	311	21.3	-11	16.2	143	10 N	5	34	6	00	6	22	8	19	40	20	25	49
12	357	10.7	-19	50.1	325	53.9	-11	01.7	145	0	5	20	5	46	6	08	8	10	45	20	31	45
13	12	10.5		49.6	340	26.6	-10	47.3	144	10 S	5	04	31	5	53	8	01	49	38	40		
14	27	10.3		49.0	354	59.3		32.7	146	20	4	45	5	13	37	7	52	54	45	35		
15	42	10.1		48.4	9	32.0		18.2	145	30	21	4	52	19	41	60	53	29				
16	57	10.0		47.9	24	04.8	-10	03.5	147	35	4	05	40	5	08	34	64	20	57	26		
17	72	09.8	-19	47.3	38	37.5	-9	48.8	147	40	3	46	4	24	4	56	7	27	67	21	02	23
18	87	09.6	-19	46.7	53	10.3	-9	34.1	148	45	3	21	4	06	4	41	7	19	71	21	08	18
19	102	09.5		46.2	67	43.2		19.3	149	50	2	48	3	42	23	09	77	15	13			
20	117	09.3		45.6	82	16.0	-9	04.4	149	52	30	31	14	7	04	79	18	11				
21	132	09.1		45.0	96	48.9	-8	49.5	149	54	2	07	17	4	05	6	59	82	21	9		
22	147	08.9		44.5	111	21.8		34.6	149	56	1	35	3	02	3	54	53	85	25	6		
23	162	08.8		43.9	125	54.7		19.6	150	58	**	**	2	43	41	46	89	29	3			
24	177	08.6	-19	43.3	140	27.6	-8	04.6	150	60 S	**	**	2	18	3	26	6	39	93	21	34	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 55.9 ^m		Mag: -3.9 PMG: 12 ^h 27 ^m		Mag: +1.0 PMG: 12 ^h 00 ^m		Mag: -2.7 PMG: 23 ^h 15 ^m		Mag: +1.0 PMG: 15 ^h 51 ^m									
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	120	22.5	173	23.5	-20	16.7	179	55.2	-21	30.7	10	05.4	+22	25.0	121	40.9	-2	57.8
1	135	25.0	188	22.7		16.0	194	55.6		30.3	25	08.2		25.0	136	43.2		57.7
2	150	27.5	203	21.9		15.3	209	56.0		29.9	40	11.1		25.0	151	45.4		57.6
3	165	29.9	218	21.1		14.6	224	56.4		29.5	55	13.9		25.1	166	47.7		57.5
4	180	32.4	233	20.3		13.9	239	56.8		29.2	70	16.7		25.1	181	50.0		57.4
5	195	34.9	248	19.5	-20	13.2	254	57.2	-21	28.8	85	19.5	+22	25.2	196	52.2	-2	57.3
6	210	37.3	263	18.7	-20	12.5	269	57.6	-21	28.4	100	22.3	+22	25.2	211	54.5	-2	57.3
7	225	39.8	278	17.9		11.8	284	58.1		28.0	115	25.1		25.3	226	56.8		57.2
8	240	42.2	293	17.1		11.1	299	58.5		27.6	130	27.9		25.3	241	59.0		57.1
9	255	44.7	308	16.3		10.4	314	58.9		27.2	145	30.7		25.4	257	01.3		57.0
10	270	47.2	323	15.5		09.7	329	59.3		26.9	160	33.5		25.4	272	03.6		56.9
11	285	49.6	338	14.7	-20	09.0	344	59.7	-21	26.5	175	36.3	+22	25.5	287	05.8	-2	56.8
12	300	52.1	353	13.9	-20	08.3	0	00.1	-21	26.1	190	39.1	+22	25.5	302	08.1	-2	56.7
13	315	54.6	8	13.1		07.6	15	00.5		25.7	205	41.9		25.6	317	10.4		56.6
14	330	57.0	23	12.3		06.9	30	01.0		25.3	220	44.8		25.6	332	12.7		56.5
15	345	59.5	38	11.5		06.2	45	01.4		24.9	235	47.6		25.7	347	14.9		56.4
16	1	02.0	53	10.7		05.5	60	01.8		24.5	250	50.4		25.7	2	17.2		56.3
17	16	04.4	68	09.9	-20	04.7	75	02.2	-21	24.1	265	53.2	+22	25.8	17	19.5	-2	56.2
18	31	06.9	83	09.1	-20	04.0	90	02.6	-21	23.8	280	56.0	+22	25.8	32	21.7	-2	56.1
19	46	09.3	98	08.3		03.3	105	03.0		23.4	295	58.8		25.9	47	24.0		56.1
20	61	11.8	113	07.5		02.6	120	03.4		23.0	311	01.6		25.9	62	26.3		56.0
21	76	14.3	128	06.7		01.9	135	03.9		22.6	326	04.4		26.0	77	28.5		55.9
22	91	16.7	143	05.9		01.2	150	04.3		22.2	341	07.2		26.0	92	30.8		55.8
23	106	19.2	158	05.1	-20	00.5	165	04.7		21.8	356	10.0		26.1	107	33.1		55.7
24	121	21.7	173	04.3	-19	59.8	180	05.1	-21	21.4	11	12.8	+22	26.1	122	35.3	-2	55.6
Dif	—		-8		+7		+4		+4		+28		0		+23		+1	

UT	SOL		LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG:12 ^h 11.6 ^m		Edad: 3.2 ^d SD: 15/5 PMG: 15 ^h 05 ^m						PHE { 4 ^h : 57/1 12 ^h : 57/2 20 ^h : 57/4 R°: 46 ^m					
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	° /	° /	° /		° /		°	h m	h m	h m	h m m	h m m	h m m	
0	177 08.6	-19 43.3	140 27.6		-8 04.6		60 N	15 48	16 39	17 32	9 36 0	20 56 95		
1	192 08.4		155 00.6	140	-7 49.5	151	58	16 01	47	37	33 4	58 91		
2	207 08.3		169 33.5	139		34.3	56	12	16 55	41	30 7	20 59 88		
3	222 08.1		184 06.5	140		19.2	54	21	17 02	46	27 10	21 00 85		
4	237 07.9		198 39.5	140	-7 04.0	152	52	30	08	50	25 12	01 82		
5	252 07.8	-19 40.5	213 12.5	140	-6 48.7	153	50	16 37	17 14	17 53	9 23 15	21 02 80		
6	267 07.6	-19 39.9	227 45.6	141	-6 33.4	153	45	16 54	17 26	18 02	9 19 19	21 05 73		
7	282 07.4		242 18.6	140		18.1	40	17 07	36	09	15 23	07 69		
8	297 07.3		256 51.6	140	-6 02.7	154	35	18	46	16	11 28	08 65		
9	312 07.1		271 24.7	141	-5 47.3	154	30	28	17 54	23	09 30	10 61		
10	327 06.9		285 57.8	141		31.9	20	17 46	18 09	36	9 03 37	12 56		
11	342 06.8	-19 37.0	300 30.8	140	-5 16.4	155	10 N	18 01	18 23	18 49	8 59 41	21 14 51		
12	357 06.6	-19 36.5	315 03.9	141	-5 00.9	155	0	18 15	18 37	19 03	8 55 46	21 16 46		
13	12 06.4		329 37.0	141	-4 45.3	156	10 S	30	18 52	18	50 51	18 41		
14	27 06.3		344 10.1	141		29.8	20	18 45	19 09	19 37	46 56	20 36		
15	42 06.1		358 43.2	141	-4 14.2	156	30	19 03	29	20 01	41 61	22 30		
16	57 05.9		13 16.3	141	-3 58.5	157	35	14	42	16	38 65	23 27		
17	72 05.8	-19 33.6	27 49.3	140	-3 42.9	156	40	19 26	19 57	20 35	8 34 69	21 25 23		
18	87 05.6	-19 33.0	42 22.4	141	-3 27.2	157	45	19 40	20 15	20 59	8 30 74	21 26 20		
19	102 05.4		56 55.5	141	-3 11.5	157	50	19 58	38	21 31	26 78	28 14		
20	117 05.3		71 28.6	141	-2 55.8	157	52	20 06	20 49	21 49	23 82	29 12		
21	132 05.1		86 01.7	141		40.0	54	15	21 02	22 10	21 84	30 9		
22	147 04.9		100 34.8	141		24.2	56	26	17	22 39	18 87	31 7		
23	162 04.8		115 07.8	140	-2 08.4	158	58	38	35	23 29	15 91	32 4		
24	177 04.6	-19 29.5	129 40.9	141	-1 52.6	158	60 S	20 52	21 58	** **	8 12 94	21 33 1		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 51.9 ^m		Mag: -3.9 PMG: 12 ^h 28 ^m		Mag: +1.0 PMG: 11 ^h 59 ^m		Mag: -2.7 PMG: 23 ^h 11 ^m		Mag: +1.0 PMG: 15 ^h 47 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /		° /		° /		° /		° /	
0	121 21.7		173 04.3	-19 59.8	180 05.1	-21 21.4	11 12.8	+22 26.1	122 35.3	-2 55.6
1	136 24.1		188 03.5	59.0	195 05.5	21.0	26 15.6	26.2	137 37.6	55.5
2	151 26.6		203 02.7	58.3	210 05.9	20.6	41 18.4	26.2	152 39.8	55.4
3	166 29.1		218 02.0	57.6	225 06.4	20.2	56 21.2	26.3	167 42.1	55.3
4	181 31.5		233 01.2	56.9	240 06.8	19.8	71 24.0	26.3	182 44.4	55.2
5	196 34.0		248 00.4	-19 56.2	255 07.2	-21 19.5	86 26.8	+22 26.4	197 46.6	-2 55.1
6	211 36.5		262 59.6	-19 55.4	270 07.6	-21 19.1	101 29.7	+22 26.4	212 48.9	-2 55.0
7	226 38.9		277 58.8	54.7	285 08.0	18.7	116 32.5	26.5	227 51.2	54.9
8	241 41.4		292 58.0	54.0	300 08.5	18.3	131 35.3	26.5	242 53.4	54.8
9	256 43.8		307 57.2	53.3	315 08.9	17.9	146 38.1	26.6	257 55.7	54.8
10	271 46.3		322 56.4	52.5	330 09.3	17.5	161 40.9	26.6	272 58.0	54.7
11	286 48.8		337 55.7	-19 51.8	345 09.7	-21 17.1	176 43.7	+22 26.7	288 00.2	-2 54.6
12	301 51.2		352 54.9	-19 51.1	0 10.1	-21 16.7	191 46.5	+22 26.7	303 02.5	-2 54.5
13	316 53.7		7 54.1	50.4	15 10.5	16.3	206 49.3	26.8	318 04.8	54.4
14	331 56.2		22 53.3	49.6	30 11.0	15.9	221 52.1	26.8	333 07.0	54.3
15	346 58.6		37 52.5	48.9	45 11.4	15.5	236 54.9	26.9	348 09.3	54.2
16	2 01.1		52 51.7	48.2	60 11.8	15.1	251 57.7	26.9	3 11.6	54.1
17	17 03.6		67 51.0	-19 47.4	75 12.2	-21 14.7	267 00.5	+22 27.0	18 13.8	-2 54.0
18	32 06.0		82 50.2	-19 46.7	90 12.6	-21 14.3	282 03.3	+22 27.0	33 16.1	-2 53.9
19	47 08.5		97 49.4	46.0	105 13.1	13.9	297 06.1	27.1	48 18.4	53.8
20	62 11.0		112 48.6	45.2	120 13.5	13.5	312 08.9	27.1	63 20.6	53.7
21	77 13.4		127 47.8	44.5	135 13.9	13.1	327 11.7	27.2	78 22.9	53.6
22	92 15.9		142 47.0	43.8	150 14.3	12.7	342 14.5	27.2	93 25.1	53.5
23	107 18.3		157 46.3	43.0	165 14.7	12.3	357 17.3	27.2	108 27.4	53.4
24	122 20.8		172 45.5	-19 42.3	180 15.1	-21 11.9	12 20.1	+22 27.3	123 29.7	-2 53.4
Dif	—		-8	+7	+4	+4	+28	0	+23	+1

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16 ^h /2 PMG:12 ^h 11.8 ^m				Edad: 4.2 ^d PHE { 4 ^h : 57/5 12 ^h : 57/7 20 ^h : 57/9 R°: 46 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	177	04.6	-19	29.5	129	40.9			-1	52.6			60 N	6 51	7 43	8 33	9 35	**	22 29	
1	192	04.5		28.9	144	13.9	140			36.8	158		58	46	35	21	35	3	27 92	
2	207	04.3		28.3	158	47.0	141			20.9	159		56	41	27	10	36	5	25 89	
3	222	04.1		27.7	173	20.0	140		-1	05.1	158		54	37	21	8 01	36	8	23 86	
4	237	04.0		27.1	187	53.0	140		-0	49.2	159		52	33	15	7 53	36	11	22 82	
5	252	03.8	-19	26.6	202	26.0	140		-0	33.3	159		50	6 30	7 09	7 45	9 36	14	22 20	
6	267	03.6	-19	26.0	216	59.0	140		-0	17.4	159		45	6 21	6 57	7 29	9 37	18	22 17	
7	282	03.5		25.4	231	32.0	140		-0	01.5	159		40	14	47	16	37	23	14 70	
8	297	03.3		24.8	246	04.9	139		+0	14.5	160		35	07	37	7 04	37	27	12 66	
9	312	03.2		24.2	260	37.9	140			30.4	159		30	6 00	29	6 55	38	29	10 62	
10	327	03.0		23.6	275	10.8	139		+0	46.3	159		20	5 47	14	37	38	36	07 56	
11	342	02.9	-19	23.0	289	43.7	139		+1	02.3	160		10 N	5 35	6 00	6 22	9 39	40	22 03	
12	357	02.7	-19	22.4	304	16.5	138		+1	18.3	160		0	5 21	5 46	6 08	9 39	46	22 01	
13	12	02.5		21.8	318	49.4	139			34.2	159		10 S	5 05	31	5 54	40	50	21 58	
14	27	02.4		21.2	333	22.2	138		+1	50.2	160		20	4 47	5 15	38	40	56	55 36	
15	42	02.2		20.7	347	55.0	138		+2	06.1	159		30	23	4 54	21	41	61	51 31	
16	57	02.1		20.1	2	27.7	137			22.1	160		35	4 07	42	5 10	41	65	49 27	
17	72	01.9	-19	19.5	17	00.4	137		+2	38.1	160		40	3 49	4 27	4 58	9 42	68	21 47	
18	87	01.8	-19	18.9	31	33.1	137		+2	54.1	160		45	3 25	4 09	4 44	9 42	74	21 44	
19	102	01.6		18.3	46	05.8	137		+3	10.0	159		50	2 52	3 46	26	43	79	41 14	
20	117	01.4		17.7	60	38.4	136			26.0	160		52	35	35	18	43	82	40 11	
21	132	01.3		17.1	75	11.0	136			41.9	159		54	2 14	22	4 08	44	84	38 9	
22	147	01.1		16.5	89	43.6	136		+3	57.9	160		56	1 45	3 07	3 58	44	87	36 7	
23	162	01.0		15.9	104	16.1	135		+4	13.8	159		58	0 55	2 49	46	44	91	35 2	
24	177	00.8	-19	15.3	118	48.6	135		+4	29.7	159		60 S	** **	2 26	3 32	9 45	95	21 32	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 15 ^h 48.0 ^m		Mag: -3.9 PMG: 12 ^h 30 ^m				Mag: +1.0 PMG: 11 ^h 59 ^m				Mag: -2.7 PMG: 23 ^h 06 ^m				Mag: +1.0 PMG: 15 ^h 44 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	122	20.8	172	45.5	-19	42.3	180	15.1	-21	11.9	12	20.1	+22	27.3	123	29.7	-2	53.4		
1	137	23.3	187	44.7		41.5	195	15.6		11.5	27	22.9		27.3	138	31.9		53.3		
2	152	25.7	202	43.9		40.8	210	16.0		11.1	42	25.7		27.4	153	34.2		53.2		
3	167	28.2	217	43.2		40.1	225	16.4		10.7	57	28.5		27.4	168	36.5		53.1		
4	182	30.7	232	42.4		39.3	240	16.8		10.3	72	31.3		27.5	183	38.7		53.0		
5	197	33.1	247	41.6	-19	38.6	255	17.3	-21	09.9	87	34.1	+22	27.5	198	41.0	-2	52.9		
6	212	35.6	262	40.8	-19	37.8	270	17.7	-21	09.5	102	36.9	+22	27.6	213	43.2	-2	52.8		
7	227	38.1	277	40.0		37.1	285	18.1		09.1	117	39.7		27.6	228	45.5		52.7		
8	242	40.5	292	39.3		36.3	300	18.5		08.7	132	42.5		27.7	243	47.8		52.6		
9	257	43.0	307	38.5		35.6	315	18.9		08.3	147	45.3		27.7	258	50.0		52.5		
10	272	45.4	322	37.7		34.8	330	19.4		07.9	162	48.1		27.8	273	52.3		52.4		
11	287	47.9	337	37.0	-19	34.1	345	19.8	-21	07.5	177	51.0	+22	27.8	288	54.6	-2	52.3		
12	302	50.4	352	36.2	-19	33.3	0	20.2	-21	07.1	192	53.8	+22	27.9	303	56.8	-2	52.2		
13	317	52.8	7	35.4		32.6	15	20.6		06.7	207	56.6		27.9	318	59.1		52.1		
14	332	55.3	22	34.6		31.8	30	21.0		06.2	222	59.4		28.0	334	01.3		52.0		
15	347	57.8	37	33.9		31.1	45	21.5		05.8	238	02.2		28.0	349	03.6		51.9		
16	3	00.2	52	33.1		30.3	60	21.9		05.4	253	05.0		28.1	4	05.9		51.8		
17	18	02.7	67	32.3	-19	29.5	75	22.3	-21	05.0	268	07.8	+22	28.1	19	08.1	-2	51.7		
18	33	05.2	82	31.6	-19	28.8	90	22.7	-21	04.6	283	10.6	+22	28.2	34	10.4	-2	51.7		
19	48	07.6	97	30.8		28.0	105	23.2		04.2	298	13.4		28.2	49	12.7		51.6		
20	63	10.1	112	30.0		27.3	120	23.6		03.8	313	16.2		28.3	64	14.9		51.5		
21	78	12.6	127	29.3		26.5	135	24.0		03.4	328	19.0		28.3	79	17.2		51.4		
22	93	15.0	142	28.5		25.8	150	24.4		03.0	343	21.8		28.3	94	19.4		51.3		
23	108	17.5	157	27.7		25.0	165	24.8		02.6	358	24.6		28.4	109	21.7		51.2		
24	123	19.9	172	27.0	-19	24.2	180	25.3	-21	02.2	13	27.4	+22	28.4	124	24.0	-2	51.1		
Dif	—		-8		+8		+4		+4		+28		0		+23		+1			

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG:12 ^h 12.1 ^m				Edad: 5.2 ^d SD: 15/8 PMG: 16 ^h 36 ^m PHE { 4 ^h : 58/0 12 ^h : 58/2 20 ^h : 58/3 R°: 50 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	177 00.8	-19 15.3	118 48.6	+4 29.7	160	60 N	15 53	16 43	17 36	9 34	1	** ** *	23 59	**		
1	192 00.7	14.7	133 21.0	+4 45.7	159	58	16 05	51	40	38 5			23 59	**		
2	207 00.5	14.1	147 53.4	+5 01.6	159	56	16	16 59	45	41 9			54 94			
3	222 00.4	13.5	162 25.8	17.5	159	54	25	17 05	49	44 12			49 9			
4	237 00.2	12.9	176 58.1	33.3	158	52	33	11	53	47 14			44 88			
5	252 00.1	-19 12.3	191 30.4	+5 49.2	159	50	16 41	17 17	17 56	9 50	16	23 40	85			
6	266 59.9	-19 11.7	206 02.6	+6 05.1	158	45	16 56	17 28	18 04	9 55	22	23 31	79			
7	281 59.8	11.1	220 34.7	20.9	158	40	17 09	39	11	10 00	26	24 74				
8	296 59.6	10.5	235 06.9	36.7	158	35	20	48	18	04 30		18 70				
9	311 59.5	09.9	249 38.9	+6 52.5	158	30	30	17 56	25	07 34		12 67				
10	326 59.3	09.3	264 10.9	+7 08.3	158	20	17 47	18 10	37	14 39		23 03	60			
11	341 59.2	-19 08.7	278 42.9	+7 24.0	157	10 N	18 02	18 24	18 50	10 19	45	22 55	55			
12	356 59.0	-19 08.1	293 14.8	+7 39.7	157	0	18 16	18 38	19 03	10 25	49	22 47	51			
13	11 58.9	07.4	307 46.7	+7 55.4	157	10 S	30	18 52	18	30 54		39 46				
14	26 58.7	06.8	322 18.4	+8 11.1	156	20	18 45	19 08	19 36	36 59		31 41				
15	41 58.6	06.2	336 50.2	26.7	156	30	19 02	29	20 00	42 65		22 35				
16	56 58.4	05.6	351 21.8	42.3	156	35	13	41	15	46 69		16 32				
17	71 58.3	-19 05.0	5 53.5	+8 57.9	156	40	19 24	19 55	20 33	10 50	73	22 10	29			
18	86 58.1	-19 04.4	20 25.0	+9 13.5	156	45	19 38	20 13	20 56	10 56	77	22 03	24			
19	101 58.0	03.8	34 56.5	29.0	155	50	19 55	35	21 28	11 02	83	21 55	18			
20	116 57.8	03.2	49 27.9	44.4	154	52	20 04	46	21 44	05 85		51 16				
21	131 57.7	02.6	63 59.2	+9 59.9	155	54	13	20 58	22 05	08 89		47 13				
22	146 57.5	02.0	78 30.5	+10 15.3	154	56	23	21 13	22 31	11 93		43 9				
23	161 57.4	01.3	93 01.7	30.6	153	58	34	30	23 13	15 96		37 6				
24	176 57.2	-19 00.7	107 32.9	+10 46.0	154	60 S	20 48	21 52	** ** *	11 20	100	21 32	1			
UT	ARIES PMG 15 ^h 44.1 ^m		VENUS Mag: -3.9 PMG: 12 ^h 31 ^m		MARTE Mag: +1.0 PMG: 11 ^h 58 ^m		JÚPITER Mag: -2.7 PMG: 23 ^h 02 ^m		SATURNO Mag: +1.0 PMG: 15 ^h 40 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /						
0	123 19.9	172 27.0	-19 24.2	180 25.3	-21 02.2	13 27.4	+22 28.4	124 24.0	-2 51.1							
1	138 22.4	187 26.2	23.5	195 25.7	01.7	28 30.2	28.5	139 26.2	51.0							
2	153 24.9	202 25.4	22.7	210 26.1	01.3	43 33.0	28.5	154 28.5	50.9							
3	168 27.3	217 24.7	21.9	225 26.5	00.9	58 35.8	28.6	169 30.7	50.8							
4	183 29.8	232 23.9	21.2	240 27.0	00.5	73 38.6	28.6	184 33.0	50.7							
5	198 32.3	247 23.1	-19 20.4	255 27.4	-21 00.1	88 41.4	+22 28.7	199 35.3	-2 50.6							
6	213 34.7	262 22.4	-19 19.6	270 27.8	-20 59.7	103 44.1	+22 28.7	214 37.5	-2 50.5							
7	228 37.2	277 21.6	18.9	285 28.2	59.3	118 46.9	28.8	229 39.8	50.4							
8	243 39.7	292 20.8	18.1	300 28.7	58.9	133 49.7	28.8	244 42.0	50.3							
9	258 42.1	307 20.1	17.3	315 29.1	58.4	148 52.5	28.9	259 44.3	50.2							
10	273 44.6	322 19.3	16.5	330 29.5	58.0	163 55.3	28.9	274 46.6	50.1							
11	288 47.1	337 18.6	-19 15.8	345 29.9	-20 57.6	178 58.1	+22 29.0	289 48.8	-2 50.0							
12	303 49.5	352 17.8	-19 15.0	0 30.4	-20 57.2	194 00.9	+22 29.0	304 51.1	-2 49.9							
13	318 52.0	7 17.0	14.2	15 30.8	56.8	209 03.7	29.1	319 53.3	49.8							
14	333 54.4	22 16.3	13.4	30 31.2	56.4	224 06.5	29.1	334 55.6	49.8							
15	348 56.9	37 15.5	12.7	45 31.6	55.9	239 09.3	29.1	349 57.9	49.7							
16	3 59.4	52 14.8	11.9	60 32.1	55.5	254 12.1	29.2	5 00.1	49.6							
17	19 01.8	67 14.0	-19 11.1	75 32.5	-20 55.1	269 14.9	+22 29.2	20 02.4	-2 49.5							
18	34 04.3	82 13.3	-19 10.3	90 32.9	-20 54.7	284 17.7	+22 29.3	35 04.6	-2 49.4							
19	49 06.8	97 12.5	09.5	105 33.3	54.3	299 20.5	29.3	50 06.9	49.3							
20	64 09.2	112 11.7	08.8	120 33.8	53.9	314 23.3	29.4	65 09.1	49.2							
21	79 11.7	127 11.0	08.0	135 34.2	53.4	329 26.1	29.4	80 11.4	49.1							
22	94 14.2	142 10.2	07.2	150 34.6	53.0	344 28.9	29.5	95 13.7	49.0							
23	109 16.6	157 09.5	06.4	165 35.0	52.6	359 31.7	29.5	110 15.9	48.9							
24	124 19.1	172 08.7	-19 05.6	180 35.5	-20 52.2	14 34.5	+22 29.6	125 18.2	-2 48.8							
Dif	—	-8	+8	+4	+4	+28	0	+23	+							

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 16'2 PMG:12 ^h 12.3 ^m				Edad: 6.2 ^d PHE { 4 ^h : 58'5 12 ^h : 58'7 20 ^h : 58'8 Rº: 53 ^m																		
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m	
0	176	57.2	-19	00.7	107	32.9	+10	46.0	120	152	60 N	6	48	7	40	8	29	9	34	1	0	06	102
1	191	57.1	-19	00.1	122	03.9	+11	01.2	120	153	58	43	32	18	42	5	**	**	**	**	**	**	
2	206	56.9	-18	59.5	136	34.9		16.5	119	151	56	39	25	8	07	48	10	**	**	**	**	**	
3	221	56.8		58.9	151	05.8		31.6	119	151	54	35	18	7	58	9	55	13	**	**	**	**	
4	236	56.7		58.3	165	36.7	+11	46.8	119	152	52	31	12	50	10	00	16	**	**	**	**	**	
5	251	56.5	-18	57.7	180	07.4	+12	01.9	117	151	50	6	28	7	07	7	43	10	05	19	**	**	**
6	266	56.4	-18	57.0	194	38.1	+12	16.9	117	150	45	6	20	6	55	7	27	10	16	24	**	**	**
7	281	56.2		56.4	209	08.7		31.9	116	150	40	13	45	14	25	29	**	**	**	**	**	**	
8	296	56.1		55.8	223	39.2	+12	46.8	115	149	35	6	06	36	7	03	33	33	**	**	**	**	
9	311	55.9		55.2	238	09.6	+13	01.7	114	148	30	5	59	28	6	54	40	36	**	**	**	**	
10	326	55.8		54.6	252	40.0		16.5	114	148	20	47	14	37	10	52	42	**	**	**	**	**	
11	341	55.7	-18	53.9	267	10.3	+13	31.3	113	148	10 N	5	35	6	00	6	23	11	02	47	23	49	58
12	356	55.5	-18	53.3	281	40.4	+13	46.0	111	147	0	5	21	5	47	6	09	11	12	52	23	36	54
13	11	55.4		52.7	296	10.5	+14	00.6	111	146	10 S	5	06	32	5	55	22	56		24	49		
14	26	55.2		52.1	310	40.5		15.2	110	146	20	4	48	5	16	40	33	61	23	11	44		
15	41	55.1		51.5	325	10.4		29.7	109	145	30	25	4	56	22	46	67	22	56	39			
16	56	55.0		50.8	339	40.3		44.2	109	145	35	4	10	44	12	11	53	70	47	36			
17	71	54.8	-18	50.2	354	10.0	+14	58.6	107	144	40	3	52	4	30	5	00	12	02	74	22	37	32
18	86	54.7	-18	49.6	8	39.6	+15	12.9	106	143	45	3	29	4	12	4	47	12	11	80	22	26	27
19	101	54.5		49.0	23	09.2		27.1	106	142	50	2	57	3	50	29	23	86	12	21			
20	116	54.4		48.3	37	38.6		41.3	104	142	52	41	39	21	29	88	22	05	19				
21	131	54.3		47.7	52	08.0	+15	55.4	104	141	54	2	20	27	12	35	92	21	58	16			
22	146	54.1		47.1	66	37.2	+16	09.4	102	140	56	1	54	3	12	4	02	42	96	50	12		
23	161	54.0		46.5	81	06.4		23.4	102	140	58	1	12	2	55	3	51	50	101	42	7		
24	176	53.8	-18	45.8	95	35.4	+16	37.2	100	138	60 S	**	**	2	33	3	37	12	59	106	21	32	1
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 15 ^h 40.2 ^m			Mag: -3.9 PMG: 12 ^h 32 ^m			Mag: +1.1 PMG: 11 ^h 57 ^m			Mag: -2.6 PMG: 22 ^h 57 ^m			Mag: +1.0 PMG: 15 ^h 36 ^m										
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	124	19.1	172	08.7	-19	05.6	180	35.5	-20	52.2	14	34.5	+22	29.6	125	18.2	-2	48.8					
1	139	21.5	187	08.0		04.8	195	35.9		51.8	29	37.3		29.6	140	20.4		48.7					
2	154	24.0	202	07.2		04.0	210	36.3		51.3	44	40.1		29.7	155	22.7		48.6					
3	169	26.5	217	06.5		03.2	225	36.7		50.9	59	42.9		29.7	170	25.0		48.5					
4	184	28.9	232	05.7		02.5	240	37.2		50.5	74	45.7		29.7	185	27.2		48.4					
5	199	31.4	247	05.0	-19	01.7	255	37.6	-20	50.1	89	48.5	+22	29.8	200	29.5	-2	48.3					
6	214	33.9	262	04.2	-19	00.9	270	38.0	-20	49.6	104	51.3	+22	29.8	215	31.7	-2	48.2					
7	229	36.3	277	03.5	-19	00.1	285	38.4		49.2	119	54.1		29.9	230	34.0		48.1					
8	244	38.8	292	02.7	-18	59.3	300	38.9		48.8	134	56.9		29.9	245	36.2		48.0					
9	259	41.3	307	02.0		58.5	315	39.3		48.4	149	59.7		30.0	260	38.5		47.9					
10	274	43.7	322	01.2		57.7	330	39.7		47.9	165	02.4		30.0	275	40.8		47.8					
11	289	46.2	337	00.5	-18	56.9	345	40.2	-20	47.5	180	05.2	+22	30.1	290	43.0	-2	47.7					
12	304	48.7	351	59.7	-18	56.1	0	40.6	-20	47.1	195	08.0	+22	30.1	305	45.3	-2	47.6					
13	319	51.1	6	59.0		55.3	15	41.0		46.7	210	10.8		30.2	320	47.5		47.5					
14	334	53.6	21	58.2		54.5	30	41.4		46.2	225	13.6		30.2	335	49.8		47.4					
15	349	56.0	36	57.5		53.7	45	41.9		45.8	240	16.4		30.3	350	52.0		47.3					
16	4	58.5	51	56.7		52.9	60	42.3		45.4	255	19.2		30.3	5	54.3		47.2					
17	20	01.0	66	56.0	-18	52.1	75	42.7	-20	45.0	270	22.0	+22	30.3	20	56.5	-2	47.2					
18	35	03.4	81	55.3	-18	51.3	90	43.2	-20	44.5	285	24.8	+22	30.4	35	58.8	-2	47.1					
19	50	05.9	96	54.5		50.5	105	43.6		44.1	300	27.6		30.4	51	01.1		47.0					
20	65	08.4	111	53.8		49.7	120	44.0		43.7	315	30.4		30.5	66	03.3		46.9					
21	80	10.8	126	53.0		48.9	135	44.4		43.3	330	33.2		30.5	81	05.6		46.8					
22	95	13.3	141	52.3		48.1	150	44.9		42.8	345	36.0		30.6	96	07.8		46.7					
23	110	15.8	156	51.5		47.3	165	45.3		42.4	0	38.8		30.6	111	10.1		46.6					
24	125	18.2	171	50.8	-18	46.4	180	45.7	-20	42.0	15	41.5	+22	30.7	126	12.3	-2	46.5					
Dif	—		-7		+8		+4		+4		+28		0		+23		+1						

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG:12 ^h 12.5 ^m				Edad: 7.2 ^d SD: 16/0 PMG: 18 ^h 17 ^m PHE { 4 ^h : 59/0 12 ^h : 59/1 20 ^h : 59/2 Rº: 58 ^m											
	hG ☉	Dec			hG ☾	Dif					Civil	Náutico	Hora	Rº	Hora	Rº
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	176	53.8	-18	45.8	95	35.4	+16	37.2	60 N	15 59	16 48	17 40	9 35 5	1 48 111		
1	191	53.7		45.2	110	04.4	+16	51.0	58	16 10	16 55	44	47 12	37 104		
2	206	53.6		44.6	124	33.2	+17	04.7	56	20	17 02	48	9 58 17	27 99		
3	221	53.4		43.9	139	02.0		18.3	54	29	09	52	10 08 20	18 95		
4	236	53.3		43.3	153	30.6		31.9	52	37	14	56	16 24	10 91		
5	251	53.2	-18	42.7	167	59.1	+17	45.3	50	16 44	17 20	17 59	10 24 27	1 04 87		
6	266	53.0	-18	42.0	182	27.6	+17	58.7	45	16 59	17 31	18 07	10 40 33	0 49 81		
7	281	52.9		41.4	196	55.9	+18	11.9	40	17 12	41	14	10 54 37	37 76		
8	296	52.8		40.8	211	24.1		25.1	35	23	49	20	11 06 41	26 73		
9	311	52.6		40.2	225	52.2		38.2	30	32	17 57	26	16 44	17 70		
10	326	52.5		39.5	240	20.2	+18	51.1	20	17 48	18 11	38	34 49	0 02 64		
11	341	52.4	-18	38.9	254	48.1	+19	04.0	10 N	18 03	18 25	18 50	11 49 54	** ** *		
12	356	52.2	-18	38.2	269	15.9	+19	16.8	0	18 16	18 38	19 03	12 04 57	** ** *		
13	11	52.1		37.6	283	43.6		29.5	10 S	30	18 52	18	18 62	** ** *		
14	26	52.0		37.0	298	11.1		42.1	20	18 44	19 08	36	34 66	23 55 52		
15	41	51.8		36.3	312	38.6	+19	54.5	30	19 01	28	19 59	12 53 71	35 47		
16	56	51.7		35.7	327	05.9	+20	06.9	35	11	39	20 13	13 03 75	23 45		
17	71	51.6	-18	35.1	341	33.1	+20	19.1	40	19 23	19 53	20 31	13 16 78	23 09 42		
18	86	51.4	-18	34.4	356	00.2	+20	31.3	45	19 36	20 10	20 53	13 31 82	22 53 37		
19	101	51.3		33.8	10	27.2		43.3	50	19 53	32	21 24	49 89	33 32		
20	116	51.2		33.1	24	54.1	+20	55.2	52	20 01	43	40	13 57 92	24 29		
21	131	51.0		32.5	39	20.9	+21	07.0	54	09	20 55	21 59	14 07 96	14 25		
22	146	50.9		31.9	53	47.5		18.7	56	19	21 09	22 24	18 101	22 02 20		
23	161	50.8		31.2	68	14.0		30.3	58	30	25	23 00	31 106	21 49 14		
24	176	50.7	-18	30.6	82	40.5	+21	41.7	60 S	20 43	21 46	** **	14 45 115	21 33 6		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 36.2 ^m		Mag: -3.9 PMG: 12 ^h 33 ^m		Mag: +1.0 PMG: 11 ^h 57 ^m		Mag: -2.6 PMG: 22 ^h 53 ^m		Mag: +1.0 PMG: 15 ^h 33 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	125	18.2	171	50.8	-18	46.4	180	45.7	-20	42.0
1	140	20.7	186	50.1		45.6	195	46.2		41.5
2	155	23.1	201	49.3		44.8	210	46.6		41.1
3	170	25.6	216	48.6		44.0	225	47.0		40.7
4	185	28.1	231	47.9		43.2	240	47.5		40.2
5	200	30.5	246	47.1	-18	42.4	255	47.9	-20	39.8
6	215	33.0	261	46.4	-18	41.6	270	48.3	-20	39.4
7	230	35.5	276	45.6		40.8	285	48.8		38.9
8	245	37.9	291	44.9		39.9	300	49.2		38.5
9	260	40.4	306	44.2		39.1	315	49.6		38.1
10	275	42.9	321	43.4		38.3	330	50.0		37.6
11	290	45.3	336	42.7	-18	37.5	345	50.5	-20	37.2
12	305	47.8	351	42.0	-18	36.7	0	50.9	-20	36.8
13	320	50.3	6	41.2		35.8	15	51.3		36.3
14	335	52.7	21	40.5		35.0	30	51.8		35.9
15	350	55.2	36	39.8		34.2	45	52.2		35.5
16	5	57.6	51	39.0		33.4	60	52.6		35.0
17	21	00.1	66	38.3	-18	32.5	75	53.1	-20	34.6
18	36	02.6	81	37.6	-18	31.7	90	53.5	-20	34.2
19	51	05.0	96	36.8		30.9	105	53.9		33.7
20	66	07.5	111	36.1		30.1	120	54.4		33.3
21	81	10.0	126	35.4		29.2	135	54.8		32.8
22	96	12.4	141	34.7		28.4	150	55.2		32.4
23	111	14.9	156	33.9		27.6	165	55.7		32.0
24	126	17.4	171	33.2	-18	26.7	180	56.1	-20	31.5
Dif	—		-7		+8		+4		+4	
								+28	0	
									+23	+

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'2 PMG:12 ^h 12.7 ^m				Edad: 8.2 ^d SD: 16'2 PMG: 19 ^h 14 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	176	50.7	-18	30.6	82	40.5	+21	41.7	73	+21	53.0	113	60 N	6 45	7 36	8 25	9 39	10	3 37 114	
1	191	50.5		29.9	97	06.8			72	+22	04.2	112	58	40	29	14	9 58	19	19 104	
2	206	50.4		29.3	111	33.0			70		15.3	111	56	36	22	8 04	10 13	26	3 04 98	
3	221	50.3		28.7	125	59.0			70		26.2	109	54	32	16	7 55	27 30		2 51 93	
4	236	50.2		28.0	140	25.0			68		37.0	108	52	29	10	47	39 34		40 89	
5	251	50.0	-18	27.4	154	50.8	+22	37.0		+22	47.7	107	50	6 26	7 05	7 40	10 50	36	2 30 86	
6	266	49.9	-18	26.7	169	16.6	+22	47.7	68	+22	58.2	105	45	6 18	6 54	7 25	11 12	42	2 09 81	
7	281	49.8		26.1	183	42.2	+22	58.2	66	+23	08.6	104	40	11	44	13	30 45		1 52 76	
8	296	49.6		25.4	198	07.7	+23	08.6	65		18.9	103	35	6 05	35	7 02	45 49		38 73	
9	311	49.5		24.8	212	33.0			63		29.0	101	30	5 59	28	6 53	11 58	51	26 70	
10	326	49.4		24.1	226	58.3			62	+23	39.0	100	20	47	14	37	12 21	55	1 05 65	
11	341	49.3	-18	23.5	241	23.5	+23	39.0		+23	48.8	98	10 N	5 35	6 01	6 23	12 41	58	0 47 62	
12	356	49.1	-18	22.8	255	48.5	+23	48.8	60	+23	58.5	97	0	5 22	5 47	6 09	13 00	61	0 30 58	
13	11	49.0		22.2	270	13.4	+23	58.5	59	+24	08.0	95	10 S	5 07	33	5 56	19 63		0 13 55	
14	26	48.9		21.5	284	38.2	+24	08.0	58		17.4	94	20	4 50	5 17	41	13 39	67	** ** *	
15	41	48.8		20.9	299	02.9			57		26.6	92	30	27	4 58	24	14 02	71	** ** *	
16	56	48.7		20.2	313	27.5			56	+24	35.7	91	35	4 12	46	14	16 73		** ** *	
17	71	48.5	-18	19.6	327	52.0	+24	35.7	55	+24	44.6	89	40	3 55	4 32	5 03	14 32	76	23 49 51	
18	86	48.4	-18	18.9	342	16.3	+24	44.6	53	+24	53.4	88	45	3 32	4 15	4 49	14 52	79	23 29 48	
19	101	48.3		18.3	356	40.6	+24	53.4	51	+25	02.0	86	50	3 02	3 54	33	15 16	84	23 03 44	
20	116	48.2		17.6	11	04.7	+25	02.0	51		10.5	85	52	2 46	43	25	28 87		22 51 41	
21	131	48.0		17.0	25	28.8			51		18.8	83	54	27	31	16	41 91		37 38	
22	146	47.9		16.3	39	52.7			49		26.9	81	56	2 02	17	4 07	15 57	95	21 34	
23	161	47.8		15.7	54	16.5			48		34.9	80	58	1 26	3 01	3 55	16 16	101	22 02 27	
24	176	47.7	-18	15.0	68	40.3	+25	34.9	48	+25	34.9	80	60 S	** **	2 40	3 43	16 39	113	21 38 16	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 32.3 ^m		Mag: -3.9 PMG: 12 ^h 34 ^m		Mag: +1.0 PMG: 11 ^h 56 ^m		Mag: -2.6 PMG: 22 ^h 49 ^m		Mag: +1.0 PMG: 15 ^h 29 ^m	
	hG ♊		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	126	17.4	171	33.2	180	56.1	16	48.5	127	06.4
1	141	19.8	186	32.5	195	56.5	31	51.3	142	08.7
2	156	22.3	201	31.8	210	57.0	46	54.1	157	10.9
3	171	24.8	216	31.0	225	57.4	61	56.9	172	13.2
4	186	27.2	231	30.3	240	57.8	76	59.6	187	15.4
5	201	29.7	246	29.6	255	58.3	92	02.4	202	17.7
6	216	32.1	261	28.9	270	58.7	107	05.2	217	19.9
7	231	34.6	276	28.1	285	59.1	122	08.0	232	22.2
8	246	37.1	291	27.4	300	59.6	137	10.8	247	24.4
9	261	39.5	306	26.7	316	00.0	152	13.6	262	26.7
10	276	42.0	321	26.0	331	00.4	167	16.4	277	29.0
11	291	44.5	336	25.2	346	00.9	182	19.1	292	31.2
12	306	46.9	351	24.5	1	01.3	197	21.9	307	33.5
13	321	49.4	6	23.8	16	01.8	212	24.7	322	35.7
14	336	51.9	21	23.1	31	02.2	227	27.5	337	38.0
15	351	54.3	36	22.4	46	02.6	242	30.3	352	40.2
16	6	56.8	51	21.7	61	03.1	257	33.1	7	42.5
17	21	59.3	66	20.9	76	03.5	272	35.9	22	44.7
18	37	01.7	81	20.2	91	03.9	287	38.6	37	47.0
19	52	04.2	96	19.5	106	04.4	302	41.4	52	49.2
20	67	06.6	111	18.8	121	04.8	317	44.2	67	51.5
21	82	09.1	126	18.1	136	05.2	332	47.0	82	53.7
22	97	11.6	141	17.4	151	05.7	347	49.8	97	56.0
23	112	14.0	156	16.6	166	06.1	2	52.6	112	58.2
24	127	16.5	171	15.9	181	06.6	17	55.3	128	00.5
Dif	—		-7		+8		+28		0	
									+23	
									+1	

UT	SOL				LUNA								Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna			Puesta de Luna						
	SD: 16'2 PMG:12 ^h 12.9 ^m				Edad: 9.2 ^d SD: 16'2 PMG: 20 ^h 16 ^m PHE { 4 ^h : 59'7 12 ^h : 59'8 20 ^h : 59'8 Rº: 66 ^m																					
	hG ☉	Dec			hG ☾	Dif			Dec	Dif					Civil	Náutico	Hora	Rº	Hora	Rº						
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m				
0	176	47.7	-18	15.0	68	40.3	46	+25	34.9	78	60 N	16	04	16	52	17	44	9	49	33	5	31	103			
1	191	47.6		14.4	83	03.9	45		42.7	76	58	15	17	00		48	10	17	42	5	03	94				
2	206	47.4		13.7	97	27.4	44		50.3	74	56	24	06	52		52	39	47		4	42	88				
3	221	47.3		13.0	111	50.8	43	+25	57.7	73	54	33	12	55		55	10	57	50	24	85					
4	236	47.2		12.4	126	14.1	43	+26	05.0	71	52	40	18	17	59		11	13	52	4	09	83				
5	251	47.1	-18	11.7	140	37.4	43	+26	12.1	71	50	16	47	17	23	18	02	11	26	54	3	56	81			
6	266	47.0	-18	11.1	155	00.5	41	+26	19.1	70	45	17	02	17	34	18	09	11	54	56	3	30	77			
7	281	46.9		10.4	169	23.5	40		25.8	67	40	14	43	16		12	15	59	3	08	75					
8	296	46.7		09.7	183	46.4	39		32.4	66	35	25	51	22		34	60		2	51	73					
9	311	46.6		09.1	198	09.3	39		38.8	64	30	34	17	59	28		12	49	61		36	71				
10	326	46.5		08.4	212	32.0	37		45.0	62	20	17	49	18	13	39		13	16	63	2	10	69			
11	341	46.4	-18	07.8	226	54.7	37	+26	51.1	61	10 N	18	03	18	25	18	51	13	39	64	1	49	66			
12	356	46.3	-18	07.1	241	17.3	36	+26	56.9	58	0	18	16	18	38	19	03	14	01	65	1	28	64			
13	11	46.2		06.4	255	39.8	35	+27	02.6	57	10 S	30	18	52		18		22	67	1	08	62				
14	26	46.0		05.8	270	02.2	34		08.1	53	20	18	44	19	07	35		14	46	68	0	46	60			
15	41	45.9		05.1	284	24.6	34		13.4	53	30	19	00	26	19	57		15	13	69	21	57				
16	56	45.8		04.4	298	46.8	32		18.5	51	35	10	38	20	12			29	70		0	06	55			
17	71	45.7	-18	03.8	313	09.0	32	+27	23.4	49	40	19	21	19	51	20	29	15	48	71	**	**	**			
18	86	45.6	-18	03.1	327	31.1	31	+27	28.1	47	45	19	34	20	08	20	51	16	11	72	**	**	**			
19	101	45.5		02.4	341	53.2	31		32.7	46	50	50	29	21	20			40	74	23	47	63				
20	116	45.4		01.8	356	15.2	30		37.0	43	52	19	58	39	35			16	55	75	32	62				
21	131	45.3		01.1	10	37.1	29		41.1	41	54	20	06	20	51	21	53	17	12	76	23	15	61			
22	146	45.1	-18	00.4	24	58.9	28		45.1	40	56	16	21	04	22	16			32	78	22	55	59			
23	161	45.0	-17	59.8	39	20.7	28		48.8	37	58	26	20	22	48			17	57	81	22	29	57			
24	176	44.9	-17	59.1	53	42.4	27	+27	52.4	36	60 S	20	39	21	39	**	**	18	32	87	21	54	52			
UT	ARIES PMG 15 ^h 28.4 ^m				VENUS Mag: -3.9 PMG: 12 ^h 36 ^m				MARTE Mag: +1.0 PMG: 11 ^h 55 ^m				JÚPITER Mag: -2.6 PMG: 22 ^h 44 ^m				SATURNO Mag: +1.0 PMG: 15 ^h 26 ^m									
	hG ♈	Dec			hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	127	16.5	171	15.9	-18	06.5	181	06.6	-20	20.9	17	55.3	+22	32.8	128	00.5	-2	41.8								
1	142	19.0	186	15.2		05.7	196	07.0		20.4	32	58.1		32.9	143	02.7		41.7								
2	157	21.4	201	14.5		04.8	211	07.4		20.0	48	00.9		32.9	158	05.0		41.6								
3	172	23.9	216	13.8		03.9	226	07.9		19.5	63	03.7		32.9	173	07.2		41.5								
4	187	26.4	231	13.1		03.1	241	08.3		19.1	78	06.5		33.0	188	09.5		41.4								
5	202	28.8	246	12.4	-18	02.2	256	08.7	-20	18.6	93	09.2	+22	33.0	203	11.7	-2	41.3								
6	217	31.3	261	11.7	-18	01.4	271	09.2	-20	18.2	108	12.0	+22	33.1	218	14.0	-2	41.2								
7	232	33.8	276	10.9	-18	00.5	286	09.6		17.7	123	14.8		33.1	233	16.2		41.1								
8	247	36.2	291	10.2	-17	59.6	301	10.1		17.2	138	17.6		33.2	248	18.5		41.0								
9	262	38.7	306	09.5		58.8	316	10.5		16.8	153	20.4		33.2	263	20.7		40.9								
10	277	41.1	321	08.8		57.9	331	10.9		16.3	168	23.2		33.2	278	23.0		40.8								
11	292	43.6	336	08.1	-17	57.1	346	11.4	-20	15.9	183	25.9	+22	33.3	293	25.2	-2	40.7								
12	307	46.1	351	07.4	-17	56.2	1	11.8	-20	15.4	198	28.7	+22	33.3	308	27.5	-2	40.6								
13	322	48.5	6	06.7		55.3	16	12.3		15.0	213	31.5		33.4	323	29.7		40.5								
14	337	51.0	21	06.0		54.5	31	12.7		14.5	228	34.3		33.4	338	32.0		40.4								
15	352	53.5	36	05.3		53.6	46	13.1		14.1	243	37.1		33.5	353	34.2		40.3								
16	7	55.9	51	04.6		52.7	61	13.6		13.6	258	39.8		33.5	8	36.5		40.2								
17	22	58.4	66	03.9	-17	51.9	76	14.0	-20	13.2	273	42.6	+22	33.6	23	38.7	-2	40.1								
18	38	00.9	81	03.2	-17	51.0	91	14.4	-20	12.7	288	45.4	+22	33.6	38	40.9	-2	40.0								
19	53	03.3	96	02.5		50.1	106	14.9		12.2	303	48.2		33.6	53	43.2		39.9								
20	68	05.8	111	01.8		49.3	121	15.3		11.8	318	51.0		33.7	68	45.4		39.8								
21	83	08.2	126	01.1		48.4	136	15.8		11.3	333	53.7		33.7	83	47.7		39.7								
22	98	10.7	141	00.4		47.5	151	16.2		10.9	348	56.5		33.8	98	49.9		39.6								
23	113	13.2	155	59.7		46.6	166	16.7		10.4	3	59.3		33.8	113	52.2		39.5								
24	128	15.6	170	59.0	-17	45.8	181	17.1	-20	10.0	19	02.1	+22	33.9	128	54.4	-2	39.4								
Dif	—				-7				+9				+28				0				+22				+	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG:12 ^h 13.1 ^m			Edad: 10.2 ^d PHE { 4 ^h : 59'9 12 ^h : 59'9 20 ^h : 59'9 PMG: 21 ^h 20 ^m R°: 64 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	44.9	-17	59.1	53	42.4	27	+27	52.4	33	60 N	6	41	7	33	8	21
1	191	44.8		58.4	68	04.1	26		55.7	32	58	37		25	10	58	74
2	206	44.7		57.8	82	25.7	26	+27	58.9	29	56	33		19	8	00	11
3	221	44.6		57.1	96	47.3	25	+28	01.8	28	54	30		13	7	52	11
4	236	44.5		56.4	111	08.8	25		04.6	25	52	27		07	45	12	03
5	251	44.4	-17	55.7	125	30.3	25	+28	07.1	24	50	6	23	7	03	7	38
6	266	44.3	-17	55.1	139	51.8	25	+28	09.5	21	45	6	16	6	52	7	23
7	281	44.2		54.4	154	13.2	24		11.6	20	40	10		42	11	13	13
8	296	44.0		53.7	168	34.5	23		13.6	17	35	6	04	34	7	01	32
9	311	43.9		53.1	182	55.9	24		15.3	15	30	5	58	27	6	52	13
10	326	43.8		52.4	197	17.2	23		16.8	14	20	47		13	36	14	17
11	341	43.7	-17	51.7	211	38.4	22	+28	18.2	11	10 N	5	35	6	01	6	23
12	356	43.6	-17	51.0	225	59.7	23	+28	19.3	9	0	5	23	5	48	6	10
13	11	43.5		50.4	240	20.9	22		20.2	7	10 S	5	08	34	5	56	28
14	26	43.4		49.7	254	42.1	22		20.9	5	20	4	51	19	42	15	52
15	41	43.3		49.0	269	03.3	22		21.4	3	30	29	5	00	26	16	21
16	56	43.2		48.3	283	24.5	22		21.7	1	35	4	15	4	48	16	38
17	71	43.1	-17	47.6	297	45.7	22	+28	21.8	2	40	3	58	4	35	5	05
18	86	43.0	-17	47.0	312	06.9	22	+28	21.6	3	45	3	36	4	19	4	52
19	101	42.9		46.3	326	28.1	22		21.3	5	50	3	07	3	58	36	17
20	116	42.8		45.6	340	49.3	22		20.8	8	52	2	52	48	29	18	08
21	131	42.7		44.9	355	10.4	21		20.0	9	54	34		36	21	26	52
22	146	42.6		44.2	9	31.6	22		19.1	12	56	2	11	23	11	18	48
23	161	42.5		43.6	23	52.8	22		17.9	14	58	1	38	3	07	4	00
24	176	42.4	-17	42.9	38	14.0	22	+28	16.5		60 S	**	**	2	48	3	48

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 24.4 ^m		Mag: -3.9 PMG: 12 ^h 37 ^m		Mag: +1.1 PMG: 11 ^h 55 ^m		Mag: -2.6 PMG: 22 ^h 40 ^m		Mag: +1.0 PMG: 15 ^h 22 ^m	
	hG ♂		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	128	15.6	170	59.0	-17	45.8	181	17.1	-20	10.0
1	143	18.1	185	58.3		44.9	196	17.5		09.5
2	158	20.6	200	57.6		44.0	211	18.0		09.0
3	173	23.0	215	56.9		43.1	226	18.4		08.6
4	188	25.5	230	56.2		42.3	241	18.9		08.1
5	203	28.0	245	55.5	-17	41.4	256	19.3	-20	07.7
6	218	30.4	260	54.8	-17	40.5	271	19.7	-20	07.2
7	233	32.9	275	54.1		39.6	286	20.2		06.7
8	248	35.4	290	53.4		38.7	301	20.6		06.3
9	263	37.8	305	52.7		37.9	316	21.1		05.8
10	278	40.3	320	52.0		37.0	331	21.5		05.4
11	293	42.7	335	51.3	-17	36.1	346	22.0	-20	04.9
12	308	45.2	350	50.6	-17	35.2	1	22.4	-20	04.4
13	323	47.7	5	49.9		34.3	16	22.8		04.0
14	338	50.1	20	49.2		33.4	31	23.3		03.5
15	353	52.6	35	48.5		32.5	46	23.7		03.0
16	8	55.1	50	47.8		31.7	61	24.2		02.6
17	23	57.5	65	47.1	-17	30.8	76	24.6	-20	02.1
18	39	00.0	80	46.4	-17	29.9	91	25.1	-20	01.6
19	54	02.5	95	45.8		29.0	106	25.5		01.2
20	69	04.9	110	45.1		28.1	121	25.9		00.7
21	84	07.4	125	44.4		27.2	136	26.4	-20	00.2
22	99	09.9	140	43.7		26.3	151	26.8	-19	59.8
23	114	12.3	155	43.0		25.4	166	27.3		59.3
24	129	14.8	170	42.3	-17	24.5	181	27.7	-19	58.8
Dif	—		-7		+9		+4		+5	
							+28		0	
									+22	
									+	

UT	SOL		LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG:12 ^h 13.3 ^m		Edad: 11.2 ^d SD: 16/3 PMG: 22 ^h 24 ^m PHE { 4 ^h : 59/9 12 ^h : 59/9 20 ^h : 59/8 R°: 63 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	42.4	-17 42.9	38 14.0	+28 16.5	16	60 N	16 09	16 57	17 48	11 38 111	8 12 23				
1	191	42.3	42.2	52 35.3	23 14.9	17	58	19	17 04	52	12 12 101	7 37 33				
2	206	42.2	41.5	66 56.5	23 13.2	20	56	29	10	55	37 95	7 12 39				
3	221	42.1	40.8	81 17.8	23 11.2	22	54	37	16	17 59	12 57 91	6 51 43				
4	236	42.0	40.1	95 39.1	23 09.0	22	52	44	21	18 02	13 14 88	34 46				
5	251	41.9	-17 39.5	110 00.4	+28 06.6	24	50	16 51	17 26	18 05	13 29 85	6 20 47				
6	266	41.8	-17 38.8	124 21.8	+28 04.0	26	45	17 05	17 36	18 12	13 58 80	5 50 52				
7	281	41.7	38.1	138 43.2	+28 01.2	28	40	17	45	18	14 21 77	26 55				
8	296	41.6	37.4	153 04.6	+27 58.2	30	35	27	17 53	24	40 74	5 07 57				
9	311	41.5	36.7	167 26.1	25 55.0	32	30	35	18 01	29	14 56 73	4 51 58				
10	326	41.4	36.0	181 47.6	25 51.5	35	20	17 51	14	40	15 24 69	4 22 61				
11	341	41.3	-17 35.3	196 09.2	+27 47.9	36	10 N	18 04	18 26	18 51	15 47 66	3 58 63				
12	356	41.2	-17 34.6	210 30.8	+27 44.1	38	0	18 17	18 38	19 04	16 09 63	3 36 65				
13	11	41.1	34.0	224 52.5	27 40.1	40	10 S	30	18 52	18	31 61	3 13 67				
14	26	41.0	33.3	239 14.2	27 35.9	42	20	43	19 07	34	16 55 57	2 49 68				
15	41	40.9	32.6	253 36.0	28 31.5	44	30	18 59	25	19 56	17 22 54	20 71				
16	56	40.8	31.9	267 57.8	28 26.9	46	35	19 09	36	20 10	38 51	2 03 73				
17	71	40.7	-17 31.2	282 19.8	+27 22.1	48	40	19 19	19 49	20 26	17 57 48	1 43 75				
18	86	40.6	-17 30.5	296 41.7	+27 17.1	50	45	19 32	20 05	20 47	18 19 45	1 19 77				
19	101	40.5	29.8	311 03.8	31 11.9	52	50	47	26	21 16	18 48 40	0 48 80				
20	116	40.4	29.1	325 25.9	31 06.5	54	52	19 55	35	30	19 02 37	33 81				
21	131	40.3	28.4	339 48.1	+27 00.9	56	54	20 03	47	21 47	18 33	0 15 83				
22	146	40.2	27.7	354 10.3	+26 55.1	58	56	12	20 59	22 09	19 37 29	** ** *				
23	161	40.1	27.0	8 32.7	34 49.2	59	58	22	21 14	22 38	20 01 22	** ** *				
24	176	40.0	-17 26.3	22 55.1	+26 43.0	62	60 S	20 34	21 33	23 28	20 32 11	** ** *				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 20.5 ^m		Mag: -3.9 PMG: 12 ^h 38 ^m		Mag: +1.1 PMG: 11 ^h 54 ^m		Mag: -2.6 PMG: 22 ^h 35 ^m		Mag: +1.0 PMG: 15 ^h 18 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	129	14.8	170 42.3	-17 24.5	181 27.7	-19 58.8	20 08.7	+22 34.9	129 48.4	-2 37.0
1	144	17.2	185 41.6	23.6	196 28.2	58.4	35 11.5	34.9	144 50.6	36.9
2	159	19.7	200 40.9	22.7	211 28.6	57.9	50 14.2	35.0	159 52.8	36.8
3	174	22.2	215 40.3	21.8	226 29.1	57.4	65 17.0	35.0	174 55.1	36.7
4	189	24.6	230 39.6	20.9	241 29.5	57.0	80 19.8	35.0	189 57.3	36.6
5	204	27.1	245 38.9	-17 20.0	256 29.9	-19 56.5	95 22.6	+22 35.1	204 59.6	-2 36.5
6	219	29.6	260 38.2	-17 19.1	271 30.4	-19 56.0	110 25.3	+22 35.1	220 01.8	-2 36.4
7	234	32.0	275 37.5	18.2	286 30.8	55.6	125 28.1	35.2	235 04.1	36.3
8	249	34.5	290 36.8	17.3	301 31.3	55.1	140 30.9	35.2	250 06.3	36.2
9	264	37.0	305 36.2	16.4	316 31.7	54.6	155 33.6	35.2	265 08.6	36.0
10	279	39.4	320 35.5	15.5	331 32.2	54.2	170 36.4	35.3	280 10.8	35.9
11	294	41.9	335 34.8	-17 14.6	346 32.6	-19 53.7	185 39.2	+22 35.3	295 13.0	-2 35.8
12	309	44.4	350 34.1	-17 13.7	1 33.1	-19 53.2	200 42.0	+22 35.4	310 15.3	-2 35.7
13	324	46.8	5 33.4	12.8	16 33.5	52.7	215 44.7	35.4	325 17.5	35.6
14	339	49.3	20 32.7	11.9	31 34.0	52.3	230 47.5	35.5	340 19.8	35.5
15	354	51.7	35 32.1	11.0	46 34.4	51.8	245 50.3	35.5	355 22.0	35.4
16	9	54.2	50 31.4	10.1	61 34.9	51.3	260 53.0	35.5	10 24.3	35.3
17	24	56.7	65 30.7	-17 09.2	76 35.3	-19 50.8	275 55.8	+22 35.6	25 26.5	-2 35.2
18	39	59.1	80 30.0	-17 08.3	91 35.8	-19 50.4	290 58.6	+22 35.6	40 28.7	-2 35.1
19	55	01.6	95 29.4	07.3	106 36.2	49.9	306 01.3	35.7	55 31.0	35.0
20	70	04.1	110 28.7	06.4	121 36.6	49.4	321 04.1	35.7	70 33.2	34.9
21	85	06.5	125 28.0	05.5	136 37.1	48.9	336 06.9	35.7	85 35.5	34.8
22	100	09.0	140 27.3	04.6	151 37.5	48.5	351 09.7	35.8	100 37.7	34.7
23	115	11.5	155 26.7	03.7	166 38.0	48.0	6 12.4	35.8	115 40.0	34.6
24	130	13.9	170 26.0	-17 02.8	181 38.4	-19 47.5	21 15.2	+22 35.9	130 42.2	-2 34.5
Dif	—		-7	+9	+4	+5	+28	0	+22	+1

UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'2 PMG:12 ^h 13.4 ^m			Edad: 12.2 ^d PHE { 4 ^h : 59'8 12 ^h : 59'7 20 ^h : 59'6 PMG: 23 ^h 25 ^m R°: 56 ^m															
	hG ☉	Dec		hG ☾	Dif		Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	176	40.0	-17	26.3	22	55.1	+26	43.0	63	60 N	6	38	7	29	8	16	13	28	114
1	191	39.9		25.6	37	17.6		36.7	65	58	34		22	8	06	13	51	106	
2	206	39.8		24.9	51	40.2		30.2	67	56	30		15	7	57	14	11	99	
3	221	39.7		24.3	66	02.9		23.5	69	54	27		10	49	26	95		33	
4	236	39.6		23.6	80	25.6		16.6	70	52	24		05	42	40	91		19	
5	251	39.5	-17	22.9	94	48.5	+26	09.6	70	50	6	21	7	00	7	35	14	52	
6	266	39.4	-17	22.2	109	11.4	+26	02.4	72	45	6	14	6	50	7	21	15	17	
7	281	39.4		21.5	123	34.5	+25	54.9	75	40	08		41	09	37	77		20	
8	296	39.3		20.8	137	57.6		47.4	75	35	6	03	33	7	00	15	53	74	
9	311	39.2		20.1	152	20.9		39.6	78	30	5	57	26	6	51	16	07	71	
10	326	39.1		19.4	166	44.2		31.7	79	20	46		13	36	31	66		22	
11	341	39.0	-17	18.7	181	07.6	+25	23.6	81	10 N	5	35	6	01	6	22	16	52	
12	356	38.9	-17	18.0	195	31.2	+25	15.3	83	0	5	23	5	48	6	10	17	11	
13	11	38.8		17.3	209	54.8	+25	06.9	84	10 S	5	09	35	5	57	30	53		
14	26	38.7		16.6	224	18.6	+24	58.3	86	20	4	52	20	43	17	51	49		
15	41	38.6		15.8	238	42.4		49.5	88	30	31	5	02	28	18	14	44		
16	56	38.5		15.1	253	06.4		40.6	89	35	17	4	51	18	28	41		3	
17	71	38.5	-17	14.4	267	30.5	+24	31.5	91	40	4	01	4	38	5	08	18	44	
18	86	38.4	-17	13.7	281	54.7	+24	22.3	92	45	3	40	4	22	4	55	19	03	
19	101	38.3		13.0	296	19.0		12.9	94	50	3	12	4	02	40	26	27		
20	116	38.2		12.3	310	43.4	+24	03.3	96	52	2	57	3	52	33	37	24		
21	131	38.1		11.6	325	07.9	+23	53.6	97	54	40		41	25	19	50	20		
22	146	38.0		10.9	339	32.6		43.8	98	56	2	18	28	16	20	05	15		
23	161	37.9		10.2	353	57.3		33.8	100	58	1	50	3	13	4	05	22	10	
24	176	37.9	-17	09.5	8	22.2	+23	23.6	102	60 S	1	00	2	55	3	53	20	42	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 16.6 ^m		Mag: -3.9 PMG: 12 ^h 39 ^m		Mag: +1.1 PMG: 11 ^h 53 ^m		Mag: -2.6 PMG: 22 ^h 31 ^m		Mag: +1.0 PMG: 15 ^h 15 ^m	
	hG ♀	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	130	13.9	170	26.0	181	38.4	21	15.2	130	42.2
1	145	16.4	185	25.3	196	38.9	36	18.0	145	44.4
2	160	18.9	200	24.6	211	39.3	51	20.7	160	46.7
3	175	21.3	215	24.0	226	39.8	66	23.5	175	48.9
4	190	23.8	230	23.3	241	40.2	81	26.3	190	51.2
5	205	26.2	245	22.6	256	40.7	96	29.0	205	53.4
6	220	28.7	260	21.9	271	41.1	111	31.8	220	55.7
7	235	31.2	275	21.3	286	41.6	126	34.6	235	57.9
8	250	33.6	290	20.6	301	42.0	141	37.3	251	00.1
9	265	36.1	305	19.9	316	42.5	156	40.1	266	02.4
10	280	38.6	320	19.3	331	42.9	171	42.9	281	04.6
11	295	41.0	335	18.6	346	43.4	186	45.6	296	06.9
12	310	43.5	350	17.9	1	43.8	201	48.4	311	09.1
13	325	46.0	5	17.3	16	44.3	216	51.2	326	11.4
14	340	48.4	20	16.6	31	44.7	231	53.9	341	13.6
15	355	50.9	35	15.9	46	45.2	246	56.7	356	15.8
16	10	53.4	50	15.3	61	45.6	261	59.5	11	18.1
17	25	55.8	65	14.6	76	46.1	277	02.2	26	20.3
18	40	58.3	80	13.9	91	46.5	292	05.0	41	22.6
19	56	00.7	95	13.3	106	47.0	307	07.7	56	24.8
20	71	03.2	110	12.6	121	47.4	322	10.5	71	27.0
21	86	05.7	125	11.9	136	47.9	337	13.3	86	29.3
22	101	08.1	140	11.3	151	48.4	352	16.0	101	31.5
23	116	10.6	155	10.6	166	48.8	7	18.8	116	33.8
24	131	13.1	170	10.0	181	49.3	22	21.6	131	36.0
Dif	—		-7	+9	+5	+5	+28	0	+22	+1

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG:12 ^h 13.5 ^m			Edad: 13.2 ^d SD: 16'2 PMG: **h **m												
	PHE { 4 ^h : 59'4 12 ^h : 59'3 20 ^h : 59'1 R°: **m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m m	h m m	h m m	
0	176	37.9	-17 09.5	8	22.2	+23 23.6	103	60 N	16 14	17 01	17 52	15 22	108	8 40	4	
1	191	37.8	08.8	22	47.2	13.3	104	58	24	08	56	37	103	24	10	
2	206	37.7	08.1	37	12.3	+23 02.9	105	56	33	14	17 59	15 50	98	8 10	15	
3	221	37.6	07.4	51	37.5	+22 52.4	108	54	41	20	18 02	16 01	94	7 58	18	
4	236	37.5	06.7	66	02.9	41.6	108	52	48	24	05	11	90	48	21	
5	251	37.4	-17 05.9	80	28.3	+22 30.8	108	50	16 54	17 29	18 08	16 20	87	7 38	25	
6	266	37.4	-17 05.2	94	53.9	+22 19.8	110	45	17 08	17 39	18 14	16 39	81	7 18	30	
7	281	37.3	04.5	109	19.6	+22 08.7	111	40	19	48	20	16 54	76	7 02	34	
8	296	37.2	03.8	123	45.4	+21 57.5	112	35	29	17 55	26	17 07	72	6 48	38	
9	311	37.1	03.1	138	11.4	46.1	114	30	37	18 02	31	18	68	36	41	
10	326	37.0	02.4	152	37.5	34.6	115	20	17 52	15	41	37	63	6 15	47	
11	341	36.9	-17 01.7	167	03.6	+21 23.0	116	10 N	18 05	18 27	18 52	17 53	58	5 56	52	
12	356	36.9	-17 01.0	181	30.0	+21 11.3	117	0	18 17	18 39	19 04	18 08	54	5 39	56	
13	11	36.8	-17 00.2	195	56.4	+20 59.4	119	10 S	29	18 51	17	23	49	22	60	
14	26	36.7	-16 59.5	210	22.9	47.4	120	20	43	19 06	34	40	44	5 03	65	
15	41	36.6	58.8	224	49.6	35.3	121	30	18 58	24	19 55	18 58	38	4 41	71	
16	56	36.5	58.1	239	16.4	23.1	122	35	19 07	35	20 08	19 09	35	28	74	
17	71	36.5	-16 57.4	253	43.3	+20 10.8	123	40	19 17	19 47	20 24	19 21	31	4 13	78	
18	86	36.4	-16 56.7	268	10.4	81	124	45	19 30	20 03	20 44	19 35	27	3 56	82	
19	101	36.3	55.9	282	37.5	45.9	125	50	44	22	21 11	19 53	21	34	89	
20	116	36.2	55.2	297	04.8	33.2	127	52	51	32	25	20 01	18	23	92	
21	131	36.1	54.5	311	32.2	20.5	127	54	19 59	42	21 42	10	15	3 11	96	
22	146	36.1	53.8	325	59.7	+19 07.6	129	56	20 08	20 55	22 02	20	12	2 57	101	
23	161	36.0	53.1	340	27.3	+18 54.7	129	58	18	21 09	22 28	32	7	41	106	
24	176	35.9	-16 52.3	354	55.1	+18 41.6	131	60 S	20 29	21 26	23 09	20 45	2	2 21	113	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 15 ^h 12.6 ^m		Mag: -3.9 PMG: 12 ^h 40 ^m		Mag: +1.1 PMG: 11 ^h 52 ^m		Mag: -2.6 PMG: 22 ^h 26 ^m		Mag: +1.0 PMG: 15 ^h 11 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	131	13.1	170	10.0	-16 40.6	181 49.3	-19 36.0	22 21.6	+22 36.8	131 36.0	-2 32.1				
1	146	15.5	185	09.3	39.6	196 49.7	35.5	37 24.3	36.9	146 38.2	32.0				
2	161	18.0	200	08.6	38.7	211 50.2	35.0	52 27.1	36.9	161 40.5	31.9				
3	176	20.5	215	08.0	37.8	226 50.6	34.5	67 29.9	37.0	176 42.7	31.8				
4	191	22.9	230	07.3	36.8	241 51.1	34.0	82 32.6	37.0	191 45.0	31.7				
5	206	25.4	245	06.7	-16 35.9	256 51.5	-19 33.5	97 35.4	+22 37.0	206 47.2	-2 31.6				
6	221	27.9	260	06.0	-16 34.9	271 52.0	-19 33.0	112 38.1	+22 37.1	221 49.4	-2 31.4				
7	236	30.3	275	05.4	34.0	286 52.4	32.6	127 40.9	37.1	236 51.7	31.3				
8	251	32.8	290	04.7	33.1	301 52.9	32.1	142 43.7	37.2	251 53.9	31.2				
9	266	35.2	305	04.0	32.1	316 53.3	31.6	157 46.4	37.2	266 56.2	31.1				
10	281	37.7	320	03.4	31.2	331 53.8	31.1	172 49.2	37.2	281 58.4	31.0				
11	296	40.2	335	02.7	-16 30.2	346 54.2	-19 30.6	187 51.9	+22 37.3	297 00.6	-2 30.9				
12	311	42.6	350	02.1	-16 29.3	1 54.7	-19 30.1	202 54.7	+22 37.3	312 02.9	-2 30.8				
13	326	45.1	5 01.4	28.3	16 55.2	16 55.2	29.6	217 57.5	37.4	327 05.1	30.7				
14	341	47.6	20 00.8	27.4	31 55.6	31 55.6	29.1	233 00.2	37.4	342 07.4	30.6				
15	356	50.0	35 00.1	26.4	46 56.1	46 56.1	28.6	248 03.0	37.4	357 09.6	30.5				
16	11	52.5	49 59.5	25.5	61 56.5	61 56.5	28.1	263 05.7	37.5	12 11.8	30.4				
17	26	55.0	64 58.8	-16 24.6	76 57.0	76 57.0	-19 27.7	278 08.5	+22 37.5	27 14.1	-2 30.3				
18	41	57.4	79 58.2	-16 23.6	91 57.4	91 57.4	-19 27.2	293 11.3	+22 37.6	42 16.3	-2 30.2				
19	56	59.9	94 57.5	22.7	106 57.9	106 57.9	26.7	308 14.0	37.6	57 18.6	30.1				
20	72	02.3	109 56.9	21.7	121 58.3	121 58.3	26.2	323 16.8	37.6	72 20.8	30.0				
21	87	04.8	124 56.2	20.8	136 58.8	136 58.8	25.7	338 19.5	37.7	87 23.0	29.9				
22	102	07.3	139 55.6	19.8	151 59.2	151 59.2	25.2	353 22.3	37.7	102 25.3	29.8				
23	117	09.7	154 54.9	18.8	166 59.7	166 59.7	24.7	8 25.0	37.8	117 27.5	29.7				
24	132	12.2	169 54.3	-16 17.9	182 00.2	182 00.2	-19 24.2	23 27.8	+22 37.8	132 29.7	-2 29.6				
Dif	—		-7		+9	+5		+28		0		+22		+	

UT	SOL				☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG:12 ^h 13.7 ^m				Edad: 14.2 ^d PHE { 4 ^h : 58'9 12 ^h : 58'7 20 ^h : 58'5 Rº: 51 ^m PMG: 0 ^h 21 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Náutico	Civil	Hora	Rº		Hora	Rº					
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	35.9	-16	52.3	354	55.1	+18	41.6	131	60 N	6	34	7	24	8	11	17	09
1	191	35.8		51.6	9	23.0		28.5	132	58	30	18	8	02	18	95	32	5
2	206	35.8		50.9	23	51.0		15.3	133	56	27	12	7	53	26	91	23	9
3	221	35.7		50.2	38	19.1	+18	02.0	134	54	24	07	45	34	87	15	12	
4	236	35.6		49.5	52	47.3	+17	48.5	135	52	21	7	02	38	40	84	08	15
5	251	35.5	-16	48.7	67	15.6	+17	35.1	134	50	6	19	6	57	7	32	17	46
6	266	35.5	-16	48.0	81	44.1	+17	21.5	136	45	6	12	6	48	7	19	17	58
7	281	35.4		47.3	96	12.6	+17	07.8	137	40	07	39	7	08	18	09	71	35
8	296	35.3		46.6	110	41.3	+16	54.1	137	35	6	01	32	6	58	17	67	25
9	311	35.2		45.8	125	10.1		40.2	139	30	5	56	25	50	25	64	16	34
10	326	35.2		45.1	139	39.0		26.3	139	20	46	12	35	38	58	7	00	40
11	341	35.1	-16	44.4	154	08.1	+16	12.3	140	10 N	5	35	6	00	6	22	18	50
12	356	35.0	-16	43.7	168	37.2	+15	58.3	140	0	5	23	5	49	6	10	19	00
13	11	34.9		42.9	183	06.4		44.2	141	10 S	5	10	36	5	58	11	43	21
14	26	34.9		42.2	197	35.8		30.0	142	20	4	54	21	45	22	38	6	07
15	41	34.8		41.5	212	05.2		15.7	143	30	33	5	04	29	35	32	5	50
16	56	34.7		40.8	226	34.8	+15	01.4	143	35	20	4	53	20	42	29	41	69
17	71	34.7	-16	40.0	241	04.5	+14	47.0	144	40	4	04	4	40	5	10	19	51
18	86	34.6	-16	39.3	255	34.3	+14	32.5	145	45	3	43	4	25	4	58	20	01
19	101	34.5		38.6	270	04.1		18.0	145	50	16	4	06	43	12	16	5	01
20	116	34.4		37.8	284	34.1	+14	03.4	146	52	3	03	3	56	36	18	12	4
21	131	34.4		37.1	299	04.2	+13	48.8	146	54	2	46	46	29	24	10	45	91
22	146	34.3		36.4	313	34.4		34.1	147	56	26	33	20	30	7	36	94	
23	161	34.2		35.6	328	04.7		19.3	148	58	2	00	19	4	10	38	3	25
24	176	34.2	-16	34.9	342	35.1	+13	04.5	148	60 S	1	19	3	02	3	59	20	46
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 15 ^h 08.7 ^m		Mag: -3.9 PMG: 12 ^h 41 ^m				Mag: +1.1 PMG: 11 ^h 52 ^m				Mag: -2.6 PMG: 22 ^h 22 ^m				Mag: +1.0 PMG: 15 ^h 08 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	132	12.2	169	54.3	-16	17.9	182	00.2	-19	24.2	23	27.8	+22	37.8	132	29.7	-2	29.6
1	147	14.7	184	53.6		16.9	197	00.6		23.7	38	30.6		37.8	147	32.0		29.5
2	162	17.1	199	53.0		16.0	212	01.1		23.2	53	33.3		37.9	162	34.2		29.4
3	177	19.6	214	52.3		15.0	227	01.5		22.7	68	36.1		37.9	177	36.5		29.3
4	192	22.1	229	51.7		14.1	242	02.0		22.2	83	38.8		38.0	192	38.7		29.2
5	207	24.5	244	51.0	-16	13.1	257	02.4	-19	21.7	98	41.6	+22	38.0	207	40.9	-2	29.1
6	222	27.0	259	50.4	-16	12.1	272	02.9	-19	21.2	113	44.3	+22	38.0	222	43.2	-2	29.0
7	237	29.5	274	49.7		11.2	287	03.4		20.7	128	47.1		38.1	237	45.4		28.9
8	252	31.9	289	49.1		10.2	302	03.8		20.2	143	49.9		38.1	252	47.6		28.8
9	267	34.4	304	48.5		09.3	317	04.3		19.7	158	52.6		38.2	267	49.9		28.7
10	282	36.8	319	47.8		08.3	332	04.7		19.2	173	55.4		38.2	282	52.1		28.5
11	297	39.3	334	47.2	-16	07.3	347	05.2	-19	18.7	188	58.1	+22	38.2	297	54.4	-2	28.4
12	312	41.8	349	46.5	-16	06.4	2	05.6	-19	18.2	204	00.9	+22	38.3	312	56.6	-2	28.3
13	327	44.2	4	45.9		05.4	17	06.1		17.7	219	03.6		38.3	327	58.8		28.2
14	342	46.7	19	45.2		04.5	32	06.6		17.2	234	06.4		38.3	342	01.1		28.1
15	357	49.2	34	44.6		03.5	47	07.0		16.7	249	09.1		38.4	358	03.3		28.0
16	12	51.6	49	44.0		02.5	62	07.5		16.2	264	11.9		38.4	13	05.5		27.9
17	27	54.1	64	43.3	-16	01.6	77	07.9	-19	15.7	279	14.6	+22	38.5	28	07.8	-2	27.8
18	42	56.6	79	42.7	-16	00.6	92	08.4	-19	15.2	294	17.4	+22	38.5	43	10.0	-2	27.7
19	57	59.0	94	42.1	-15	59.6	107	08.9		14.7	309	20.2		38.5	58	12.3		27.6
20	73	01.5	109	41.4		58.6	122	09.3		14.2	324	22.9		38.6	73	14.5		27.5
21	88	04.0	124	40.8		57.7	137	09.8		13.7	339	25.7		38.6	88	16.7		27.4
22	103	06.4	139	40.1		56.7	152	10.2		13.2	354	28.4		38.7	103	19.0		27.3
23	118	08.9	154	39.5		55.7	167	10.7		12.7	9	31.2		38.7	118	21.2		27.2
24	133	11.3	169	38.9	-15	54.8	182	11.2	-19	12.2	24	33.9	+22	38.7	133	23.4	-2	27.1
Dif	—		-6		+10		+5		+5		+28		0		+22		+	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna							
	SD: 16/2 PMG:12 ^h 13.8 ^m				Edad: 15.2 ^d SD: 15/9 PMG: 1 ^h 12 ^m PHE { 4 ^h : 58/2 12 ^h : 58/0 20 ^h : 57/7 Rº: 48 ^m																			
	hG ☉	Dec			hG ☾	Dif			Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº						
h	°	/	°	/	°	/		°	/		°	h	m	h	m	h	m	m	h	m	m			
0	176	34.2	-16	34.9	342	35.1	+13	04.5			60 N	16	19	17	06	17	57	18	48	95	8	43	1	
1	191	34.1		34.2	357	05.6	+12	49.7	148		58		29	12	18	00		53	90		37	5		
2	206	34.0		33.4	11	36.1		34.8	149		56		37	18	03			18	57	87		32	8	
3	221	34.0		32.7	26	06.8		19.9	149		54		45	23	06			19	01	84		27	11	
4	236	33.9		32.0	40	37.6	+12	04.9	150		52		51	28	08			04	82		23	13		
5	251	33.8	-16	31.2	55	08.5	+11	49.8	151		50	16	58	17	32	18	11	19	07	79	8	18	16	
6	266	33.8	-16	30.5	69	39.4	+11	34.8	150		45	17	11	17	42	18	17	19	14	73	8	10	20	
7	281	33.7		29.8	84	10.5		19.7	151		40		21	50	22	20		20	68		8	02	25	
8	296	33.6		29.0	98	41.6	+11	04.5	152		35		31	17	57	27		24	65		7	56	29	
9	311	33.6		28.3	113	12.8	+10	49.3	152		30		39	18	04	32		29	61		50	32		
10	326	33.5		27.6	127	44.2		34.1	152		20		17	53	16	42		36	56		40	38		
11	341	33.4	-16	26.8	142	15.6	+10	18.8	153		10 N	18	05	18	27	18	53	19	42	51	7	32	42	
12	356	33.4	-16	26.1	156	47.1	+10	03.5	153		0	18	17	18	39	19	04	19	48	46	7	23	48	
13	11	33.3		25.3	171	18.6	+9	48.2	153		10 S		29	18	51	17		19	54	41		15	52	
14	26	33.3		24.6	185	50.3		32.9	153		20		42	19	05	33		20	00	36		7	06	58
15	41	33.2		23.9	200	22.0		17.5	154		30	18	57	22	19	53		07	31		6	56	63	
16	56	33.1		23.1	214	53.9	+9	02.1	154		35	19	06	33	20	06		11	28		50	67		
17	71	33.1	-16	22.4	229	25.8	+8	46.7	154		40	19	15	19	45	20	21	20	16	24	6	43	71	
18	86	33.0	-16	21.6	243	57.7	+8	31.2	155		45	19	27	20	00	20	41	20	21	20	6	35	75	
19	101	32.9		20.9	258	29.8		15.7	155		50		41	19	21	07		28	14		25	81		
20	116	32.9		20.1	273	01.9	+8	00.3	154		52		48	28	20		30	13		21	83			
21	131	32.8		19.4	287	34.1	+7	44.7	156		54	19	55	38		36		34	9		16	86		
22	146	32.8		18.7	302	06.4		29.2	155		56	20	04	20	50	21	55	37	7		10	90		
23	161	32.7		17.9	316	38.7	+7	13.7	155		58		13	21	03	22	19	41	4		6	04	93	
24	176	32.6	-16	17.2	331	11.2	+6	58.1	156		60 S	20	24	21	20	22	54	20	45	1	5	57	97	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO															
	PMG 15 ^h 04.8 ^m		Mag: -3.9 PMG: 12 ^h 42 ^m		Mag: +1.1 PMG: 11 ^h 51 ^m		Mag: -2.6 PMG: 22 ^h 18 ^m		Mag: +1.0 PMG: 15 ^h 04 ^m															
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec															
h	°	/	°	/	°	/	°	/	°	/														
0	133	11.3	169	38.9	-15	54.8	182	11.2	-19	12.2	24	33.9	+22	38.7	133	23.4	-2	27.1						
1	148	13.8	184	38.2		53.8	197	11.6		11.7	39	36.7		38.8	148	25.7		27.0						
2	163	16.3	199	37.6		52.8	212	12.1		11.2	54	39.4		38.8	163	27.9		26.9						
3	178	18.7	214	37.0		51.8	227	12.5		10.7	69	42.2		38.8	178	30.1		26.8						
4	193	21.2	229	36.3		50.9	242	13.0		10.2	84	44.9		38.9	193	32.4		26.7						
5	208	23.7	244	35.7	-15	49.9	257	13.5	-19	09.7	99	47.7	+22	38.9	208	34.6	-2	26.6						
6	223	26.1	259	35.1	-15	48.9	272	13.9	-19	09.2	114	50.4	+22	39.0	223	36.8	-2	26.5						
7	238	28.6	274	34.4		47.9	287	14.4		08.7	129	53.2		39.0	238	39.1		26.4						
8	253	31.1	289	33.8		47.0	302	14.8		08.2	144	55.9		39.0	253	41.3		26.2						
9	268	33.5	304	33.2		46.0	317	15.3		07.7	159	58.7		39.1	268	43.6		26.1						
10	283	36.0	319	32.5		45.0	332	15.8		07.2	175	01.4		39.1	283	45.8		26.0						
11	298	38.4	334	31.9	-15	44.0	347	16.2	-19	06.7	190	04.2	+22	39.2	298	48.0	-2	25.9						
12	313	40.9	349	31.3	-15	43.0	2	16.7	-19	06.2	205	06.9	+22	39.2	313	50.3	-2	25.8						
13	328	43.4	4	30.7		42.0	17	17.2		05.7	220	09.7		39.2	328	52.5		25.7						
14	343	45.8	19	30.0		41.1	32	17.6		05.1	235	12.4		39.3	343	54.7		25.6						
15	358	48.3	34	29.4		40.1	47	18.1		04.6	250	15.2		39.3	358	57.0		25.5						
16	13	50.8	49	28.8		39.1	62	18.5		04.1	265	17.9		39.3	13	59.2		25.4						
17	28	53.2	64	28.2	-15	38.1	77	19.0	-19	03.6	280	20.7	+22	39.4	29	01.4	-2	25.3						
18	43	55.7	79	27.5	-15	37.1	92	19.5	-19	03.1	295	23.4	+22	39.4	44	03.7	-2	25.2						
19	58	58.2	94	26.9		36.1	107	19.9		02.6	310	26.2		39.5	59	05.9		25.1						
20	74	00.6	109	26.3		35.2	122	20.4		02.1	325	28.9		39.5	74	08.1		25.0						
21	89	03.1	124	25.7		34.2	137	20.9		01.6	340	31.7		39.5	89	10.4		24.9						
22	104	05.6	139	25.0		33.2	152	21.3		01.1	355	34.4		39.6	104	12.6		24.8						
23	119	08.0	154	24.4		32.2	167	21.8	-19	00.6	10	37.1		39.6	119	14.8		24.7						
24	134	10.5	169	23.8	-15	31.2	182	22.3	-19	00.0	25	39.9	+22	39.6	134	17.1	-2	24.6						
Dif	—		-6		+10		+5		+5		+27		0		+22		+1							

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG:12 ^h 13.9 ^m			Edad: 16.2 ^d SD: 15/7 PMG: 1 ^h 59 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	176	32.6	-16	17.2	331	11.2	+6	58.1	60 N	6	30	7	20	8	07	20	21
1	191	32.6		16.4	345	43.6		42.5	58	27	14	7	57	22	86	40	3
2	206	32.5		15.7	0	16.2		27.0	56	24	08	49	23	82	38	6	
3	221	32.5		14.9	14	48.8	+6	11.4	54	21	7	03	42	24	79	36	8
4	236	32.4		14.2	29	21.5	+5	55.8	52	19	6	59	35	24	77	34	11
5	251	32.3	-16	13.4	43	54.3	+5	40.1	50	6	16	6	55	7	29	20	25
6	266	32.3	-16	12.7	58	27.1	+5	24.5	45	6	10	6	45	7	16	20	26
7	281	32.2		12.0	72	59.9	+5	08.9	40	05	37	7	06	27	65	26	22
8	296	32.2		11.2	87	32.9	+4	53.3	35	6	00	30	6	56	28	61	23
9	311	32.1		10.5	102	05.9		37.6	30	5	55	24	48	29	58	21	28
10	326	32.1		09.7	116	38.9		22.0	20	45	12	34	30	53	17	34	
11	341	32.0	-16	09.0	131	12.0	+4	06.4	10 N	5	35	6	00	6	22	20	31
12	356	31.9	-16	08.2	145	45.2	+3	50.8	0	5	24	5	49	6	10	20	33
13	11	31.9		07.5	160	18.4		35.1	10 S	5	11	37	5	59	34	38	
14	26	31.8		06.7	174	51.7		19.5	20	4	55	23	46	35	33	8	02
15	41	31.8		05.9	189	25.0	+3	03.9	30	35	5	06	31	37	27	7	58
16	56	31.7		05.2	203	58.4	+2	48.3	35	22	4	55	22	37	25	55	63
17	71	31.7	-16	04.4	218	31.8	+2	32.7	40	4	07	4	43	5	13	20	38
18	86	31.6	-16	03.7	233	05.3	+2	17.1	45	3	47	4	28	5	01	20	39
19	101	31.6		02.9	247	38.8	+2	01.5	50	21	09	4	47	41	12	45	76
20	116	31.5		02.2	262	12.3	+1	45.9	52	3	08	4	00	40	41	10	43
21	131	31.5		01.4	276	45.9		30.3	54	2	53	3	50	33	42	8	41
22	146	31.4	-16	00.7	291	19.6	+1	14.8	56	34	39	25	43	5	39	84	
23	161	31.4	-15	59.9	305	53.3	+0	59.2	58	2	09	25	15	43	3	36	87
24	176	31.3	-15	59.2	320	27.0	+0	43.7	60 S	1	35	3	09	4	05	20	44

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 00.8 ^m		Mag: -3.9 PMG: 12 ^h 43 ^m		Mag: +1.1 PMG: 11 ^h 50 ^m		Mag: -2.6 PMG: 22 ^h 13 ^m		Mag: +1.0 PMG: 15 ^h 01 ^m									
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	134	10.5	169	23.8	-15	31.2	182	22.3	-19	00.0	25	39.9	+22	39.6	134	17.1	-2	24.6
1	149	12.9	184	23.2		30.2	197	22.7	-18	59.5	40	42.6		39.7	149	19.3		24.5
2	164	15.4	199	22.5		29.2	212	23.2		59.0	55	45.4		39.7	164	21.5		24.4
3	179	17.9	214	21.9		28.2	227	23.7		58.5	70	48.1		39.8	179	23.8		24.3
4	194	20.3	229	21.3		27.2	242	24.1		58.0	85	50.9		39.8	194	26.0		24.1
5	209	22.8	244	20.7	-15	26.2	257	24.6	-18	57.5	100	53.6	+22	39.8	209	28.2	-2	24.0
6	224	25.3	259	20.1	-15	25.2	272	25.0	-18	57.0	115	56.4	+22	39.9	224	30.5	-2	23.9
7	239	27.7	274	19.4		24.2	287	25.5		56.4	130	59.1		39.9	239	32.7		23.8
8	254	30.2	289	18.8		23.2	302	26.0		55.9	146	01.8		39.9	254	34.9		23.7
9	269	32.7	304	18.2		22.2	317	26.4		55.4	161	04.6		40.0	269	37.2		23.6
10	284	35.1	319	17.6		21.2	332	26.9		54.9	176	07.3		40.0	284	39.4		23.5
11	299	37.6	334	17.0	-15	20.2	347	27.4	-18	54.4	191	10.1	+22	40.0	299	41.6	-2	23.4
12	314	40.1	349	16.4	-15	19.2	2	27.8	-18	53.9	206	12.8	+22	40.1	314	43.9	-2	23.3
13	329	42.5	4	15.7		18.2	17	28.3		53.4	221	15.6		40.1	329	46.1		23.2
14	344	45.0	19	15.1		17.2	32	28.8		52.8	236	18.3		40.2	344	48.3		23.1
15	359	47.4	34	14.5		16.2	47	29.2		52.3	251	21.1		40.2	359	50.6		23.0
16	14	49.9	49	13.9		15.2	62	29.7		51.8	266	23.8		40.2	14	52.8		22.9
17	29	52.4	64	13.3	-15	14.2	77	30.2	-18	51.3	281	26.5	+22	40.3	29	55.0	-2	22.8
18	44	54.8	79	12.7	-15	13.2	92	30.6	-18	50.8	296	29.3	+22	40.3	44	57.3	-2	22.7
19	59	57.3	94	12.1		12.2	107	31.1		50.2	311	32.0		40.3	59	59.5		22.6
20	74	59.8	109	11.5		11.2	122	31.6		49.7	326	34.8		40.4	75	01.7		22.5
21	90	02.2	124	10.8		10.2	137	32.0		49.2	341	37.5		40.4	90	03.9		22.3
22	105	04.7	139	10.2		09.2	152	32.5		48.7	356	40.2		40.5	105	06.2		22.2
23	120	07.2	154	09.6		08.2	167	33.0		48.2	11	43.0		40.5	120	08.4		22.1
24	135	09.6	169	09.0	-15	07.2	182	33.4	-18	47.7	26	45.7	+22	40.5	135	10.6	-2	22.0
Dif	—		-6	+10			+5	+5			+27	0		+22		+		

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG:12 ^h 14.0 ^m				Edad: 17.2 ^d SD: 15/5 PMG: 2 ^h 43 ^m PHE { 4 ^h : 56/7 12 ^h : 56/4 20 ^h : 56/2 R°: 44 ^m													
	hG ☉	Dec			hG ☾	Dif					Civil		Náutico	Hora	R°	Hora	R°	
h	°	/	°	/	°	/		°	h	m	h	m	h	m	m	h	m	m
0	176	31.3	-15	59.2	320	27.0	+0	43.7	60 N	16	25	17	11	18	01	21	51	89
1	191	31.2		58.4	335	00.7		28.2	58	34	17	04		48	85		43	3
2	206	31.2		57.6	349	34.5	+0	12.7	56	42	22	07		45	83		44	6
3	221	31.1		56.9	4	08.4	-0	02.8	54	49	27	09		43	79		44	
4	236	31.1		56.1	18	42.3		18.2	52	16	55	31	12	41	77		45	11
5	251	31.0	-15	55.4	33	16.2	-0	33.7	50	17	01	17	35	18	14	21	39	75
6	266	31.0	-15	54.6	47	50.1	-0	49.1	45	17	13	17	44	18	19	21	35	70
7	281	30.9		53.9	62	24.1	-1	04.5	40	24	52	24		32	65		48	22
8	296	30.9		53.1	76	58.1		19.8	35	33	17	59		29	62		49	26
9	311	30.8		52.3	91	32.1		35.2	30	40	18	05		34	27		58	30
10	326	30.8		51.6	106	06.1	-1	50.5	20	17	54	17		43	23		52	34
11	341	30.8	-15	50.8	120	40.2	-2	05.8	10 N	18	06	18	28	18	53	21	19	48
12	356	30.7	-15	50.1	135	14.3	-2	21.1	0	18	17	18	39	19	04	21	15	44
13	11	30.7		49.3	149	48.5		36.3	10 S	29	18	51		16	12		39	54
14	26	30.6		48.5	164	22.6	-2	51.5	20	41	19	04		32	08		35	56
15	41	30.6		47.8	178	56.8	-3	06.7	30	18	56	21	19	51	04	30		57
16	56	30.5		47.0	193	31.0		21.9	35	19	04	31	20	04	02		26	58
17	71	30.5	-15	46.2	208	05.2	-3	37.0	40	19	13	19	43	20	19	21	00	22
18	86	30.4	-15	45.5	222	39.4	-3	52.1	45	19	25	19	57	20	38	20	57	18
19	101	30.4		44.7	237	13.7	-4	07.1	50		38	20	15	21	03	53		14
20	116	30.3		43.9	251	47.9		22.1	52		45	24	15	51	12	01		75
21	131	30.3		43.2	266	22.2		37.1	54	19	52	34	30		50	9		02
22	146	30.2		42.4	280	56.5	-4	52.1	56	20	00	45	21	48	48	7		03
23	161	30.2		41.6	295	30.8	-5	07.0	58	09	20	58	22	10	46	3		03
24	176	30.2	-15	40.9	310	05.1	-5	21.9	60 S	20	19	21	13	22	41	20	43	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 56.9 ^m		Mag: -3.9 PMG: 12 ^h 44 ^m		Mag: +1.2 PMG: 11 ^h 49 ^m		Mag: -2.6 PMG: 22 ^h 09 ^m		Mag: +1.0 PMG: 14 ^h 57 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	/	°	/	°	/	°	/	°	/
0	135	09.6	169	09.0	-15	07.2	182	33.4	-18	47.7
1	150	12.1	184	08.4		06.2	197	33.9		47.1
2	165	14.5	199	07.8		05.2	212	34.4		46.6
3	180	17.0	214	07.2		04.2	227	34.9		46.1
4	195	19.5	229	06.6		03.2	242	35.3		45.6
5	210	21.9	244	06.0	-15	02.1	257	35.8	-18	45.0
6	225	24.4	259	05.4	-15	01.1	272	36.3	-18	44.5
7	240	26.9	274	04.8	-15	00.1	287	36.7		44.0
8	255	29.3	289	04.2	-14	59.1	302	37.2		43.5
9	270	31.8	304	03.5		58.1	317	37.7		43.0
10	285	34.3	319	02.9		57.1	332	38.1		42.4
11	300	36.7	334	02.3	-14	56.1	347	38.6	-18	41.9
12	315	39.2	349	01.7	-14	55.0	2	39.1	-18	41.4
13	330	41.7	4	01.1		54.0	17	39.6		40.9
14	345	44.1	19	00.5		53.0	32	40.0		40.3
15	0	46.6	33	59.9		52.0	47	40.5		39.8
16	15	49.0	48	59.3		51.0	62	41.0		39.3
17	30	51.5	63	58.7	-14	49.9	77	41.4	-18	38.8
18	45	54.0	78	58.1	-14	48.9	92	41.9	-18	38.2
19	60	56.4	93	57.5		47.9	107	42.4		37.7
20	75	58.9	108	56.9		46.9	122	42.8		37.2
21	91	01.4	123	56.3		45.9	137	43.3		36.6
22	106	03.8	138	55.7		44.8	152	43.8		36.1
23	121	06.3	153	55.1		43.8	167	44.3		35.6
24	136	08.8	168	54.5	-14	42.8	182	44.7	-18	35.1
Dif	—		-6		+10		+5		+5	
								+27		0
									+22	
										+

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna							
	SD: 16'2 PMG:12 ^h 14.0 ^m				Edad: 18.2 ^d PHE { 4 ^h : 55'9 12 ^h : 55'7 20 ^h : 55'5 SD: 15'3 PMG: 3 ^h 26 ^m R°: 42 ^m																				
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico		Civil		Hora		R°		Hora		R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m	h	m	m
0	176	30.2	-15	40.9	310	05.1	-5	21.9	148	60 N	6	26	7	16	8	02	23	19	89	8	41	**			
1	191	30.1		40.1	324	39.4		36.7	153	58	23		10	7	53	12	85		45	3					
2	206	30.1		39.3	339	13.8	-5	51.5	148	56	20		05	45		06	81		49	6					
3	221	30.0		38.6	353	48.1	-6	06.3	148	54	18		00	38	23	01	78		52	9					
4	236	30.0		37.8	8	22.5		21.0	147	52	16		56	32	22	56	75		55	11					
5	251	29.9	-15	37.0	22	56.8	-6	35.7	147	50	6	13	6	52	7	26	22	52	73	8	58	13			
6	266	29.9	-15	36.3	37	31.2	-6	50.3	146	45	6	08	6	43	7	14	22	43	67	9	04	18			
7	281	29.9		35.5	52	05.5	-7	04.9	146	40	6	03	35	7	04	36	63		09	22					
8	296	29.8		34.7	66	39.9		19.4	145	35	5	58	28	6	55	29	60		13	26					
9	311	29.8		33.9	81	14.3		33.9	145	30	54		22	47	24	56		17	29						
10	326	29.7		33.2	95	48.6	-7	48.4	145	20	45		11	34	14	51		24	34						
11	341	29.7	-15	32.4	110	23.0	-8	02.8	144	10 N	5	35	6	00	6	22	22	05	47	9	30	38			
12	356	29.7	-15	31.6	124	57.3	-8	17.1	143	0	5	24	5	49	6	11	21	58	42	9	36	42			
13	11	29.6		30.9	139	31.7		31.4	143	10 S	5	12		37	5	59	50	39		41	47				
14	26	29.6		30.1	154	06.0		45.7	143	20	4	57	24	47	42	34		47	52						
15	41	29.6		29.3	168	40.4	-8	59.9	142	30	37		5	07	33	32	30		54	57					
16	56	29.5		28.5	183	14.7	-9	14.1	142	35	25		4	57	25	27	26		9	58	60				
17	71	29.5	-15	27.8	197	49.0	-9	28.2	141	40	4	10	4	46	5	15	21	21	23	10	03	63			
18	86	29.4	-15	27.0	212	23.4	-9	42.2	140	45	3	51	4	31	5	04	21	14	19	10	08	68			
19	101	29.4		26.2	226	57.7	-9	56.3	141	50	26		13	4	50	06	14		14	73					
20	116	29.4		25.4	241	32.0	-10	10.2	139	52	3	13	4	05	44	21	02	12		17	75				
21	131	29.3		24.6	256	06.2		24.1	139	54	2	59	3	55	37	20	58	9		21	77				
22	146	29.3		23.9	270	40.5		37.9	138	56	41		44	29	53	7	24	81							
23	161	29.3		23.1	285	14.8	-10	51.7	138	58	2	19	31	20	48	3	28	84							
24	176	29.2	-15	22.3	299	49.0	-11	05.5	138	60 S	1	48	3	16	4	10	20	42	0	10	33	88			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 14 ^h 53.0 ^m		Mag: -3.9 PMG: 12 ^h 45 ^m		Mag: +1.2 PMG: 11 ^h 49 ^m		Mag: -2.6 PMG: 22 ^h 05 ^m		Mag: +1.0 PMG: 14 ^h 54 ^m			
	hG ♀		Dec		hG ♂		Dec		hG ♃		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'
0	136	08.8	168	54.5	-14	42.8	182	44.7	-18	35.1	27	51.4
1	151	11.2	183	53.9		41.8	197	45.2		34.5	42	54.1
2	166	13.7	198	53.3		40.7	212	45.7		34.0	57	56.9
3	181	16.1	213	52.7		39.7	227	46.2		33.5	72	59.6
4	196	18.6	228	52.1		38.7	242	46.6		32.9	88	02.3
5	211	21.1	243	51.6	-14	37.6	257	47.1	-18	32.4	103	05.1
6	226	23.5	258	51.0	-14	36.6	272	47.6	-18	31.9	118	07.8
7	241	26.0	273	50.4		35.6	287	48.0		31.3	133	10.5
8	256	28.5	288	49.8		34.6	302	48.5		30.8	148	13.3
9	271	30.9	303	49.2		33.5	317	49.0		30.3	163	16.0
10	286	33.4	318	48.6		32.5	332	49.5		29.7	178	18.7
11	301	35.9	333	48.0	-14	31.5	347	49.9	-18	29.2	193	21.5
12	316	38.3	348	47.4	-14	30.4	2	50.4	-18	28.7	208	24.2
13	331	40.8	3	46.8		29.4	17	50.9		28.2	223	26.9
14	346	43.3	18	46.2		28.4	32	51.4		27.6	238	29.6
15	1	45.7	33	45.6		27.3	47	51.8		27.1	253	32.4
16	16	48.2	48	45.0		26.3	62	52.3		26.5	268	35.1
17	31	50.6	63	44.5	-14	25.2	77	52.8	-18	26.0	283	37.8
18	46	53.1	78	43.9	-14	24.2	92	53.3	-18	25.5	298	40.6
19	61	55.6	93	43.3		23.2	107	53.7		24.9	313	43.3
20	76	58.0	108	42.7		22.1	122	54.2		24.4	328	46.0
21	92	00.5	123	42.1		21.1	137	54.7		23.9	343	48.7
22	107	03.0	138	41.5		20.1	152	55.2		23.3	358	51.5
23	122	05.4	153	40.9		19.0	167	55.6		22.8	13	54.2
24	137	07.9	168	40.4	-14	18.0	182	56.1	-18	22.3	28	56.9
Dif	—		-6		+10		+5		+5		+27	
											0	
											+22	
											+1	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16/2 PMG: 12 ^h 14.1 ^m				Edad: 19.2 ^d SD: 15/1 PMG: 4 ^h 08 ^m PHE { 4 ^h : 55/3 12 ^h : 55/1 20 ^h : 54/9 Rº: 44 ^m																		
	hG ☉	Dec			hG ☾	Dif			Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº					
h	°	/	°	/	°	/	°	/	°	/	°	h	m	h	m	h	m	m	h	m	m		
0	176	29.2	-15	22.3	299	49.0	-11	05.5	136	60 N	16	30	17	16	18	05	**	**	**	8	40	1	
1	191	29.2		21.5	314	23.2		19.1	136	58	39	21		08		**	**	**		48	5		
2	206	29.2		20.8	328	57.5		32.7	136	56	46	26		10		**	**	**		8	55	8	
3	221	29.1		20.0	343	31.6		46.3	136	54	53	31		13		**	**	**		9	01	12	
4	236	29.1		19.2	358	05.8	-11	59.8	135	52	16	59	35	15		**	**	**		06	15		
5	251	29.0	-15	18.4	12	40.0	-12	13.2	134	50	17	04	17	39	18	17	**	**	**		9	11	17
6	266	29.0	-15	17.6	27	14.1	-12	26.6	134	45	17	16	17	47	18	22	23	50	69		9	22	22
7	281	29.0		16.8	41	48.2		39.9	133	40	26	17	54	27		39	64			31	26		
8	296	29.0		16.1	56	22.3	-12	53.2	133	35	35	18	01	31		29	61			39	29		
9	311	28.9		15.3	70	56.4	-13	06.4	132	30	42	07		35		20	59			46	32		
10	326	28.9		14.5	85	30.4		19.5	130	20	17	55	18	44		23	05	54		9	58	36	
11	341	28.9	-15	13.7	100	04.4	-13	32.5	130	10 N	18	07	18	28	18	53	22	52	50		10	08	41
12	356	28.8	-15	12.9	114	38.4	-13	45.5	130	0	18	18	18	39	19	04	22	40	46		10	18	45
13	11	28.8		12.1	129	12.4	-13	58.5	130	10 S	29		18	50	16		29	42			28	49	
14	26	28.8		11.4	143	46.3	-14	11.3	128	20	40	19	03	31		16	38			39	53		
15	41	28.7		10.6	158	20.2		24.1	128	30	18	54	19	50	19	50	22	02	33		51	58	
16	56	28.7		09.8	172	54.1		36.8	127	35	19	02	29	20	02	21	53	31		10	58	61	
17	71	28.7	-15	09.0	187	27.9	-14	49.5	126	40	19	11	19	40	20	16	21	44	27		11	06	65
18	86	28.6	-15	08.2	202	01.7	-15	02.1	125	45	19	22	19	54	20	34	21	33	23		11	16	68
19	101	28.6		07.4	216	35.5		14.6	125	50	35		20	12	20	58	20	18			27	74	
20	116	28.6		06.6	231	09.3		27.1	125	52	41	20		21	10	14	16			32	77		
21	131	28.6		05.9	245	43.0		39.4	123	54	48	29		24		07	14			38	80		
22	146	28.5		05.1	260	16.6	-15	51.7	123	56	19	55	40	21	41	21	00	10			45	83	
23	161	28.5		04.3	274	50.3	-16	04.0	123	58	20	04	20	52	22	02	20	51	7		11	52	87
24	176	28.5	-15	03.5	289	23.9	-16	16.1	121	60 S	20	13	21	07	22	29	20	42	2		12	01	91
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO														
	PMG 14 ^h 49.0 ^m		Mag: -3.9 PMG: 12 ^h 46 ^m		Mag: +1.2 PMG: 11 ^h 48 ^m		Mag: -2.6 PMG: 22 ^h 00 ^m		Mag: +1.0 PMG: 14 ^h 50 ^m														
	hG ♈	hG ♀			Dec	hG ♂	Dec			hG ♃	Dec			hG ♄	Dec								
h	°	/	°	/	°	/	°	/	°	/	°	/	°	/	°	/	°	/					
0	137	07.9	168	40.4	-14	18.0	182	56.1	-18	22.3	28	56.9	+22	42.2	136	57.6	-2	16.9					
1	152	10.4	183	39.8		16.9	197	56.6		21.7	43	59.7		42.3	151	59.9		16.8					
2	167	12.8	198	39.2		15.9	212	57.1		21.2	59	02.4		42.3	167	02.1		16.7					
3	182	15.3	213	38.6		14.8	227	57.6		20.6	74	05.1		42.3	182	04.3		16.6					
4	197	17.8	228	38.0		13.8	242	58.0		20.1	89	07.8		42.4	197	06.6		16.5					
5	212	20.2	243	37.4	-14	12.7	257	58.5	-18	19.6	104	10.6	+22	42.4	212	08.8	-2	16.3					
6	227	22.7	258	36.9	-14	11.7	272	59.0	-18	19.0	119	13.3	+22	42.4	227	11.0	-2	16.2					
7	242	25.1	273	36.3		10.7	287	59.5		18.5	134	16.0		42.5	242	13.2		16.1					
8	257	27.6	288	35.7		09.6	302	59.9		18.0	149	18.7		42.5	257	15.5		16.0					
9	272	30.1	303	35.1		08.6	318	00.4		17.4	164	21.5		42.5	272	17.7		15.9					
10	287	32.5	318	34.5		07.5	333	00.9		16.9	179	24.2		42.6	287	19.9		15.8					
11	302	35.0	333	33.9	-14	06.5	348	01.4	-18	16.3	194	26.9	+22	42.6	302	22.1	-2	15.7					
12	317	37.5	348	33.4	-14	05.4	3	01.9	-18	15.8	209	29.6	+22	42.6	317	24.4	-2	15.6					
13	332	39.9	3	32.8		04.4	18	02.3		15.2	224	32.4		42.7	332	26.6		15.5					
14	347	42.4	18	32.2		03.3	33	02.8		14.7	239	35.1		42.7	347	28.8		15.4					
15	2	44.9	33	31.6		02.3	48	03.3		14.2	254	37.8		42.7	2	31.0		15.3					
16	17	47.3	48	31.1		01.2	63	03.8		13.6	269	40.5		42.8	17	33.3		15.2					
17	32	49.8	63	30.5	-14	00.2	78	04.2	-18	13.1	284	43.3	+22	42.8	32	35.5	-2	15.0					
18	47	52.2	78	29.9	-13	59.1	93	04.7	-18	12.5	299	46.0	+22	42.8	47	37.7	-2	14.9					
19	62	54.7	93	29.3		58.0	108	05.2		12.0	314	48.7		42.9	62	39.9		14.8					
20	77	57.2	108	28.8		57.0	123	05.7		11.4	329	51.4		42.9	77	42.2		14.7					
21	92	59.6	123	28.2		55.9	138	06.2		10.9	344	54.1		42.9	92	44.4		14.6					
22	108	02.1	138	27.6		54.9	153	06.6		10.4	359	56.9		43.0	107	46.6		14.5					
23	123	04.6	153	27.0		53.8	168	07.1		09.8	14	59.6		43.0	122	48.8		14.4					
24	138	07.0	168	26.5	-13	52.8	183	07.6	-18	09.3	30	02.3	+22	43.0	137	51.1	-2	14.3					
Dif	—		-6		+11		+5		+5		+27		0		+22		+		+				

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG:12 ^h 14.1 ^m			Edad: 20.2 ^d SD: 14/9 PMG: 4 ^h 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	176	28.5	-15	03.5	289	23.9	-16	16.1	6 22	7 11	7 57	0 48 91	8 40 1		
1	191	28.4		02.7	303	57.5 ¹⁴⁶		28.2 ¹²¹	19	06	48	37 86	8 52 6		
2	206	28.4		01.9	318	31.0 ¹⁴⁵		40.2 ¹²⁰	17	7 01	41	27 82	9 02 11		
3	221	28.4		01.1	333	04.5 ¹⁴⁵	-16	52.1 ¹¹⁹	15	6 56	34	19 78	11 11		
4	236	28.4	-15	00.3	347	37.9 ¹⁴⁴	-17	04.0 ¹¹⁹	12	52	28	11 75	19 17		
5	251	28.3	-14	59.5	2	11.3 ¹⁴⁴	-17	15.8 ¹¹⁸	6 10	6 49	7 23	0 05 72	9 27 19		
6	266	28.3	-14	58.7	16	44.7 ¹⁴⁴	-17	27.5 ¹¹⁷	6 06	6 40	7 11	** ** *	9 42 24		
7	281	28.3		58.0	31	18.0 ¹⁴³		39.1 ¹¹⁶	6 01	33	7 01	** ** *	9 55 28		
8	296	28.3		57.2	45	51.3 ¹⁴³	-17	50.6 ¹¹⁵	5 57	27	6 53	** ** *	10 06 31		
9	311	28.2		56.4	60	24.5 ¹⁴²	-18	02.1 ¹¹⁵	53	21	46	** ** *	16 34		
10	326	28.2		55.6	74	57.7 ¹⁴²		13.5 ¹¹⁴	44	10	33	23 58 53	33 38		
11	341	28.2	-14	54.8	89	30.9 ¹⁴²	-18	24.8 ¹¹³	5 35	6 00	6 21	23 41 49	10 48 42		
12	356	28.2	-14	54.0	104	04.0 ¹⁴¹	-18	36.0 ¹¹²	5 24	5 49	6 11	23 25 46	11 02 45		
13	11	28.2		53.2	118	37.0 ¹⁴⁰		47.1 ¹¹¹	5 12	38	6 00	23 09 43	15 49		
14	26	28.1		52.4	133	10.1 ¹⁴¹	-18	58.2 ¹¹¹	4 58	25	5 48	22 53 39	30 53		
15	41	28.1		51.6	147	43.0 ¹³⁹	-19	09.1 ¹⁰⁹	39	09	35	34 35	48 57		
16	56	28.1		50.8	162	15.9 ¹³⁹		20.0 ¹⁰⁹	27	5 00	27	22 34	11 58 59		
17	71	28.1	-14	50.0	176	48.8 ¹³⁹	-19	30.8 ¹⁰⁸	4 13	4 48	5 18	22 10 30	12 09 63		
18	86	28.0	-14	49.2	191	21.6 ¹³⁸	-19	41.5 ¹⁰⁷	3 54	4 35	5 07	21 55 27	12 23 67		
19	101	28.0		48.4	205	54.4 ¹³⁸	-19	52.2 ¹⁰⁷	31	17	4 54	37 22	40 72		
20	116	28.0		47.6	220	27.1 ¹³⁷	-20	02.7 ¹⁰⁵	19	09	48	29 19	47 75		
21	131	28.0		46.8	234	59.8 ¹³⁷		13.1 ¹⁰⁴	3 05	4 00	41	19 17	12 56 78		
22	146	28.0		46.0	249	32.4 ¹³⁶		23.5 ¹⁰⁴	2 48	3 49	34	21 09 12	13 06 82		
23	161	27.9		45.2	264	05.0 ¹³⁶		33.8 ¹⁰³	27	37	25	20 56 9	18 86		
24	176	27.9	-14	44.4	278	37.5 ¹³⁵	-20	43.9 ¹⁰¹	2 00	3 22	4 16	20 42 3	13 31 92		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 45.1 ^m		Mag: -3.9 PMG: 12 ^h 47 ^m		Mag: +1.2 PMG: 11 ^h 47 ^m		Mag: -2.6 PMG: 21 ^h 56 ^m		Mag: +1.0 PMG: 14 ^h 46 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	138	07.0	168	26.5	-13	52.8	183	07.6	-18	09.3
1	153	09.5	183	25.9		51.7	198	08.1		08.7
2	168	12.0	198	25.3		50.6	213	08.6		08.2
3	183	14.4	213	24.7		49.6	228	09.0		07.6
4	198	16.9	228	24.2		48.5	243	09.5		07.1
5	213	19.4	243	23.6	-13	47.5	258	10.0	-18	06.5
6	228	21.8	258	23.0	-13	46.4	273	10.5	-18	06.0
7	243	24.3	273	22.5		45.3	288	11.0		05.4
8	258	26.7	288	21.9		44.3	303	11.5		04.9
9	273	29.2	303	21.3		43.2	318	11.9		04.3
10	288	31.7	318	20.8		42.2	333	12.4		03.8
11	303	34.1	333	20.2	-13	41.1	348	12.9	-18	03.2
12	318	36.6	348	19.6	-13	40.0	3	13.4	-18	02.7
13	333	39.1	3	19.1		39.0	18	13.9		02.1
14	348	41.5	18	18.5		37.9	33	14.3		01.6
15	3	44.0	33	17.9		36.8	48	14.8		01.0
16	18	46.5	48	17.4		35.8	63	15.3	-18	00.5
17	33	48.9	63	16.8	-13	34.7	78	15.8	-17	59.9
18	48	51.4	78	16.2	-13	33.6	93	16.3	-17	59.4
19	63	53.9	93	15.7		32.5	108	16.8		58.8
20	78	56.3	108	15.1		31.5	123	17.3		58.3
21	93	58.8	123	14.5		30.4	138	17.7		57.7
22	109	01.2	138	14.0		29.3	153	18.2		57.2
23	124	03.7	153	13.4		28.3	168	18.7		56.6
24	139	06.2	168	12.9	-13	27.2	183	19.2	-17	56.1
Dif	—		-6	+11			+5	+5		+27
										0
										+22
										+

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16/2 PMG:12 ^h 14.2 ^m				Edad: 21.2 ^d SD: 14/8 PMG: 5 ^h 36 ^m PHE { 4 ^h : 54/4 12 ^h : 54/3 20 ^h : 54/3 Rº: 48 ^m																
	hG ☉	Dec	hG ☾	Dif	Dec	Dif				Civil			Náutico	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m			
0	176	27.9	-14	44.4	278	37.5	-20	43.9	101	58	60 N	16 35	17 20	18 10	2 19 94	8 41 6					
1	191	27.9		43.6	293	09.9	-20	54.0	100	58		43	26	12	2 03 87	8 58 12					
2	206	27.9		42.8	307	42.4	-21	04.0	99	56		51	30	14	1 49 82	9 13 17					
3	221	27.9		42.0	322	14.7		13.9	99	54		16 57	34	16	37 78	25 21					
4	236	27.8		41.2	336	47.0		23.7	98	52		17 03	38	18	26 76	36 24					
5	251	27.8	-14	40.4	351	19.3	-21	33.4	97	50		17 08	17 42	18 20	1 17 73	9 46 26					
6	266	27.8	-14	39.6	5	51.5	-21	43.0	96	45		17 19	17 50	18 25	0 58 67	10 06 32					
7	281	27.8		38.8	20	23.6	-21	52.6	96	40		29	17 57	29	42 64	23 35					
8	296	27.8		38.0	34	55.7	-22	02.0	94	35		37	18 03	33	29 61	37 38					
9	311	27.8		37.2	49	27.7		11.3	93	30		44	09	37	0 17 59	10 50 39					
10	326	27.7		36.4	63	59.7		20.5	92	20		17 56	19	45	** ** *	11 11 43					
11	341	27.7	-14	35.6	78	31.6	-22	29.7	92	10 N		18 07	18 29	18 54	** ** *	11 30 46					
12	356	27.7	-14	34.8	93	03.4	-22	38.7	90	0		18 18	18 39	19 04	** ** *	11 47 49					
13	11	27.7		34.0	107	35.2		47.6	89	10 S		28	18 50	15	23 52 48	12 04 52					
14	26	27.7		33.2	122	07.0	-22	56.5	89	20		39	19 02	29	32 46	23 55					
15	41	27.7		32.4	136	38.7	-23	05.2	87	30		18 52	18	48	23 09 42	45 58					
16	56	27.7		31.6	151	10.3		13.8	86	35		19 00	27	19 59	22 56 40	12 57 61					
17	71	27.6	-14	30.7	165	41.9	-23	22.4	86	40		19 09	19 38	20 13	22 40 38	13 12 64					
18	86	27.6	-14	29.9	180	13.4	-23	30.8	84	45		19 19	19 51	20 31	22 22 35	13 30 67					
19	101	27.6		29.1	194	44.9		39.1	83	50		31	20 08	20 54	21 59 30	13 52 71					
20	116	27.6		28.3	209	16.3		47.3	82	52		37	16	21 05	48 28	14 02 74					
21	131	27.6		27.5	223	47.6	-23	55.4	81	54		44	25	18	36 25	14 77					
22	146	27.6		26.7	238	18.9	-24	03.4	80	56		51	35	34	21 22	28 80					
23	161	27.6		25.9	252	50.1		11.3	79	58		19 59	20 46	21 53	21 05 17	14 44 86					
24	176	27.6	-14	25.1	267	21.3	-24	19.1	78	60 S		20 08	21 00	22 19	20 45 9	15 03 94					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO												
	PMG 14 ^h 41.2 ^m	Mag: -3.9 PMG: 12 ^h 48 ^m	Mag: +1.2 PMG: 11 ^h 46 ^m	Mag: -2.6 PMG: 21 ^h 52 ^m	Mag: +1.0 PMG: 14 ^h 43 ^m																
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec												
h	°	'	°	'	°	'	°	'	°	'											
0	139	06.2	168	12.9	-13	27.2	183	19.2	-17	56.1											
1	154	08.6	183	12.3		26.1	198	19.7		55.5											
2	169	11.1	198	11.7		25.0	213	20.2		55.0											
3	184	13.6	213	11.2		24.0	228	20.6		54.4											
4	199	16.0	228	10.6		22.9	243	21.1		53.9											
5	214	18.5	243	10.1	-13	21.8	258	21.6	-17	53.3											
6	229	21.0	258	09.5	-13	20.7	273	22.1	-17	52.7											
7	244	23.4	273	08.9		19.7	288	22.6		52.2											
8	259	25.9	288	08.4		18.6	303	23.1		51.6											
9	274	28.3	303	07.8		17.5	318	23.6		51.1											
10	289	30.8	318	07.3		16.4	333	24.0		50.5											
11	304	33.3	333	06.7	-13	15.3	348	24.5	-17	50.0											
12	319	35.7	348	06.2	-13	14.3	3	25.0	-17	49.4											
13	334	38.2	3	05.6		13.2	18	25.5		48.9											
14	349	40.7	18	05.1		12.1	33	26.0		48.3											
15	4	43.1	33	04.5		11.0	48	26.5		47.7											
16	19	45.6	48	03.9		09.9	63	27.0		47.2											
17	34	48.1	63	03.4	-13	08.8	78	27.5	-17	46.6											
18	49	50.5	78	02.8	-13	07.8	93	27.9	-17	46.1											
19	64	53.0	93	02.3		06.7	108	28.4		45.5											
20	79	55.5	108	01.7		05.6	123	28.9		44.9											
21	94	57.9	123	01.2		04.5	138	29.4		44.4											
22	110	00.4	138	00.6		03.4	153	29.9		43.8											
23	125	02.8	153	00.1		02.3	168	30.4		43.3											
24	140	05.3	167	59.5	-13	01.2	183	30.9	-17	42.7											
Dif	—		-6		+11		+5		+6												

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 16/2 PMG:12 ^h 14.2 ^m				Edad: 22.2 ^d PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2 PMG: 6 ^h 23 ^m R°: 49 ^m																	
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	176	27.6	-14	25.1	267	21.3	-24	19.1	267	21.3	-24	19.1	6 17	7 07	7 51	3 52 92	8 45 11					
1	191	27.6		24.3	281	52.4		26.8	281	52.4		26.8	15	7 01	44	29 82	9 09 20					
2	206	27.5		23.5	296	23.4		34.3	296	23.4		34.3	13	6 57	36	3 10 77	28 26					
3	221	27.5		22.6	310	54.4		41.8	310	54.4		41.8	11	53	30	2 54 73	45 29					
4	236	27.5		21.8	325	25.4		49.2	325	25.4		49.2	09	49	25	40 71	9 59 31					
5	251	27.5	-14	21.0	339	56.2	-24	56.4	339	56.2	-24	56.4	6 07	6 46	7 19	2 29 68	10 11 34					
6	266	27.5	-14	20.2	354	27.0	-25	03.5	354	27.0	-25	03.5	6 03	6 38	7 08	2 04 64	10 36 38					
7	281	27.5		19.4	8 57.8			10.5	8 57.8			10.5	5 59	31	6 59	1 45 61	10 56 40					
8	296	27.5		18.6	23 28.5			17.4	23 28.5			17.4	55	25	51	28 59	11 13 42					
9	311	27.5		17.8	37 59.2			24.2	37 59.2			24.2	51	19	44	1 14 57	28 44					
10	326	27.5		17.0	52 29.7			30.9	52 29.7			30.9	43	6 09	32	0 51 54	11 53 46					
11	341	27.5	-14	16.1	67 00.3		-25	37.4	67 00.3		-25	37.4	5 34	5 59	6 21	0 30 52	12 14 49					
12	356	27.5	-14	15.3	81 30.7		-25	43.9	81 30.7		-25	43.9	5 25	5 49	6 11	0 11 49	12 35 50					
13	11	27.4		14.5	96 01.2			50.2	96 01.2			50.2	5 13	39	6 00	** ** *	12 55 52					
14	26	27.4		13.7	110 31.5		-25	56.4	110 31.5		-25	56.4	4 59	26	5 49	** ** *	13 17 54					
15	41	27.4		12.9	125 01.8		-26	02.5	125 01.8		-26	02.5	41	11	36	23 50 47	42 56					
16	56	27.4		12.1	139 32.1			08.5	139 32.1			08.5	29	5 02	29	35 45	13 57 58					
17	71	27.4	-14	11.2	154 02.3		-26	14.3	154 02.3		-26	14.3	4 15	4 51	5 20	23 17 44	14 14 60					
18	86	27.4	-14	10.4	168 32.4		-26	20.0	168 32.4		-26	20.0	3 58	4 38	5 10	22 55 42	14 35 62					
19	101	27.4		09.6	183 02.5			25.6	183 02.5			25.6	35	21	4 58	28 39	15 02 64					
20	116	27.4		08.8	197 32.5			31.1	197 32.5			31.1	24	13	52	15 37	15 66					
21	131	27.4		08.0	212 02.5			36.5	212 02.5			36.5	3 11	4 05	45	22 00 35	29 69					
22	146	27.4		07.2	226 32.4			41.7	226 32.4			41.7	2 55	3 54	38	21 42 33	15 47 72					
23	161	27.4		06.3	241 02.3			46.8	241 02.3			46.8	36	43	30	21 20 28	16 08 77					
24	176	27.4	-14	05.5	255 32.1		-26	51.8	255 32.1		-26	51.8	2 11	3 29	4 21	20 53 19	16 35 86					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG 14 ^h 37.2 ^m			Mag: -3.9 PMG: 12 ^h 48 ^m			Mag: +1.1 PMG: 11 ^h 46 ^m			Mag: -2.6 PMG: 21 ^h 47 ^m			Mag: +1.0 PMG: 14 ^h 39 ^m									
	hG ♈			hG ♀			hG ♂			hG ♃			hG ♄									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	140	05.3	167	59.5	-13	01.2	183	30.9	-17	42.7	32	12.6	+22	44.6	139	37.8	-2	09.0				
1	155	07.8	182	59.0	-13	00.1	198	31.4		42.1	47	15.3		44.6	154	40.0		08.9				
2	170	10.2	197	58.4	-12	59.1	213	31.8		41.6	62	18.0		44.6	169	42.2		08.8				
3	185	12.7	212	57.9		58.0	228	32.3		41.0	77	20.7		44.7	184	44.4		08.7				
4	200	15.2	227	57.3		56.9	243	32.8		40.4	92	23.4		44.7	199	46.7		08.6				
5	215	17.6	242	56.8	-12	55.8	258	33.3	-17	39.9	107	26.1	+22	44.7	214	48.9	-2	08.5				
6	230	20.1	257	56.2	-12	54.7	273	33.8	-17	39.3	122	28.8	+22	44.8	229	51.1	-2	08.4				
7	245	22.6	272	55.7		53.6	288	34.3		38.8	137	31.5		44.8	244	53.3		08.3				
8	260	25.0	287	55.2		52.5	303	34.8		38.2	152	34.2		44.8	259	55.5		08.2				
9	275	27.5	302	54.6		51.4	318	35.3		37.6	167	36.9		44.9	274	57.8		08.0				
10	290	30.0	317	54.1		50.3	333	35.8		37.1	182	39.6		44.9	290	00.0		07.9				
11	305	32.4	332	53.5	-12	49.2	348	36.3	-17	36.5	197	42.3	+22	44.9	305	02.2	-2	07.8				
12	320	34.9	347	53.0	-12	48.1	3 36.7	-17	35.9	212	45.0	+22	45.0	320	04.4	-2	07.7					
13	335	37.3	2 52.4		47.0		18 37.2		35.4	227	47.7		45.0	335	06.6		07.6					
14	350	39.8	17 51.9		45.9		33 37.7		34.8	242	50.4		45.0	350	08.9		07.5					
15	5 42.3	32 51.3		44.8		44.8	48 38.2		34.2	257	53.1		45.1	5 11.1		07.4						
16	20 44.7	47 50.8		43.7		43.7	63 38.7		33.7	272	55.8		45.1	20 13.3		07.3						
17	35 47.2	62 50.3	-12	42.6		42.6	78 39.2	-17	33.1	287	58.5	+22	45.1	35 15.5	-2	07.2						
18	50 49.7	77 49.7	-12	41.5		41.5	93 39.7	-17	32.5	303	01.2	+22	45.1	50 17.7	-2	07.0						
19	65 52.1	92 49.2		40.4		40.4	108 40.2		32.0	318	04.0		45.2	65 20.0		06.9						
20	80 54.6	107 48.6		39.3		39.3	123 40.7		31.4	333	06.7		45.2	80 22.2		06.8						
21	95 57.1	122 48.1		38.2		38.2	138 41.2		30.8	348	09.4		45.2	95 24.4		06.7						
22	110 59.5	137 47.6		37.1		37.1	153 41.7		30.3	3 12.1		45.3		110 26.6		06.6						
23	126 02.0	152 47.0		36.0		36.0	168 42.2		29.7	18 14.8		45.3		125 28.8		06.5						
24	141 04.4	167 46.5	-12	34.9		34.9	183 42.7	-17	29.1	33 17.5	+22	45.3		140 31.1	-2	06.4						
Dif	—			-5			+5			+6			+27			0			+22			+1

UT	SOL		LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG:12 ^h 14.2 ^m		Edad: 23.2 ^d SD: 14/8 PMG: 7 ^h 12 ^m		PHE { 4 ^h : 54/2 12 ^h : 54/3 20 ^h : 54/3 R°: 53 ^m									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /		° /		°	h m	h m	h m	h m m	h m m	h m m	
0	176 27.4	-14 05.5	255 32.1		-26 51.8		60 N	16 40	17 25	18 15	5 24 78	8 56 32		
1	191 27.4	04.7	270 01.9	108	-26 56.7	49	58	48	30	16	4 51 70	9 29 39		
2	206 27.4	03.9	284 31.6	107	-27 01.4	47	56	16 55	34	18	27 67	9 54 42		
3	221 27.4	03.0	299 01.3	107	06.1	47	54	17 01	38	20	4 07 65	10 14 44		
4	236 27.4	02.2	313 30.9	106	10.6	45	52	06	42	22	3 51 63	30 46		
5	251 27.4	-14 01.4	328 00.4	105	-27 14.9	43	50	17 11	17 45	18 23	3 37 62	10 45 46		
6	266 27.4	-14 00.6	342 30.0	106	-27 19.2	43	45	17 22	17 53	18 27	3 08 60	11 14 48		
7	281 27.4	-13 59.8	356 59.4	104	23.3	41	40	31	17 59	31	2 46 58	36 50		
8	296 27.4	58.9	11 28.8	104	27.2	39	35	39	18 05	35	27 58	11 55 51		
9	311 27.4	58.1	25 58.2	104	31.1	39	30	45	10	38	2 11 57	12 12 50		
10	326 27.4	57.3	40 27.5	103	34.8	37	20	17 57	20	46	1 45 55	12 39 52		
11	341 27.4	-13 56.5	54 56.8	103	-27 38.4	36	10 N	18 08	18 29	18 54	1 22 53	13 03 52		
12	356 27.4	-13 55.6	69 26.1	103	-27 41.9	35	0	18 18	18 39	19 04	1 00 53	13 25 53		
13	11 27.4	54.8	83 55.3	102	45.2	33	10 S	28	18 49	15	0 39 51	13 47 54		
14	26 27.4	54.0	98 24.4	101	48.4	32	20	38	19 01	28	0 16 50	14 11 54		
15	41 27.4	53.2	112 53.5	101	51.4	30	30	51	16	46	** ** *	38 55		
16	56 27.4	52.3	127 22.6	101	54.4	30	35	18 58	25	19 57	** ** *	14 55 55		
17	71 27.4	-13 51.5	141 51.6	100	-27 57.2	28	40	19 06	19 35	20 10	** ** *	15 14 56		
18	86 27.4	-13 50.7	156 20.6	100	-27 59.8	26	45	19 16	19 48	20 27	23 37 54	15 37 56		
19	101 27.4	49.9	170 49.6	100	-28 02.4	26	50	28	20 04	20 49	23 07 53	16 06 58		
20	116 27.4	49.0	185 18.5	99	04.8	24	52	33	11	21 00	22 52 53	21 58		
21	131 27.4	48.2	199 47.4	99	07.0	22	54	40	20	13	35 53	38 58		
22	146 27.4	47.4	214 16.2	98	09.1	21	56	46	30	27	22 15 52	16 59 59		
23	161 27.4	46.5	228 45.0	98	11.1	20	58	19 54	41	21 45	21 48 52	17 25 60		
24	176 27.4	-13 45.7	243 13.8	98	-28 13.0	19	60 S	20 03	20 54	22 08	21 12 50	18 01 62		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 33.3 ^m		Mag: -3.9 PMG: 12 ^h 49 ^m		Mag: +1.1 PMG: 11 ^h 45 ^m		Mag: -2.6 PMG: 21 ^h 43 ^m		Mag: +1.0 PMG: 14 ^h 36 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	141 04.4	167 46.5	-12 34.9	183 42.7	-17 29.1	33 17.5	+22 45.3	140 31.1	-2 06.4	
1	156 06.9	182 45.9	33.8	198 43.1	28.6	48 20.2	45.4	155 33.3	06.3	
2	171 09.4	197 45.4	32.7	213 43.6	28.0	63 22.9	45.4	170 35.5	06.2	
3	186 11.8	212 44.9	31.6	228 44.1	27.4	78 25.6	45.4	185 37.7	06.0	
4	201 14.3	227 44.3	30.5	243 44.6	26.8	93 28.3	45.4	200 39.9	05.9	
5	216 16.8	242 43.8	-12 29.4	258 45.1	-17 26.3	108 30.9	+22 45.5	215 42.1	-2 05.8	
6	231 19.2	257 43.3	-12 28.3	273 45.6	-17 25.7	123 33.6	+22 45.5	230 44.4	-2 05.7	
7	246 21.7	272 42.7	27.2	288 46.1	25.1	138 36.3	45.5	245 46.6	05.6	
8	261 24.2	287 42.2	26.1	303 46.6	24.6	153 39.0	45.6	260 48.8	05.5	
9	276 26.6	302 41.7	25.0	318 47.1	24.0	168 41.7	45.6	275 51.0	05.4	
10	291 29.1	317 41.1	23.9	333 47.6	23.4	183 44.4	45.6	290 53.2	05.3	
11	306 31.6	332 40.6	-12 22.8	348 48.1	-17 22.8	198 47.1	+22 45.7	305 55.5	-2 05.2	
12	321 34.0	347 40.1	-12 21.7	3 48.6	-17 22.3	213 49.8	+22 45.7	320 57.7	-2 05.0	
13	336 36.5	2 39.5	20.6	18 49.1	21.7	228 52.5	45.7	335 59.9	04.9	
14	351 38.9	17 39.0	19.4	33 49.6	21.1	243 55.2	45.7	351 02.1	04.8	
15	6 41.4	32 38.5	18.3	48 50.1	20.5	258 57.9	45.8	6 04.3	04.7	
16	21 43.9	47 37.9	17.2	63 50.6	20.0	274 00.6	45.8	21 06.5	04.6	
17	36 46.3	62 37.4	-12 16.1	78 51.1	-17 19.4	289 03.3	+22 45.8	36 08.8	-2 04.5	
18	51 48.8	77 36.9	-12 15.0	93 51.6	-17 18.8	304 06.0	+22 45.9	51 11.0	-2 04.4	
19	66 51.3	92 36.3	13.9	108 52.0	18.2	319 08.7	45.9	66 13.2	04.3	
20	81 53.7	107 35.8	12.8	123 52.5	17.7	334 11.4	45.9	81 15.4	04.2	
21	96 56.2	122 35.3	11.7	138 53.0	17.1	349 14.1	46.0	96 17.6	04.0	
22	111 58.7	137 34.8	10.5	153 53.5	16.5	4 16.8	46.0	111 19.8	03.9	
23	127 01.1	152 34.2	09.4	168 54.0	15.9	19 19.5	46.0	126 22.1	03.8	
24	142 03.6	167 33.7	-12 08.3	183 54.5	-17 15.4	34 22.2	+22 46.0	141 24.3	-2 03.7	
Dif	—	-5	+11	+5	+6	+27	0	+22	+	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG:12 ^h 14.2 ^m				Edad: 24.2 ^d SD: 14/8 PMG: 8 ^h 04 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°		Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	176	27.4	-13	45.7	243	13.8	-28	13.0	60 N	6	13	7	46	6	40	44
1	191	27.4		44.9	257	42.6		14.7	58	11	6	57	39	6	00	47
2	206	27.4		44.0	272	11.3		16.3	56	09	53	32	5	32	49	35
3	221	27.4		43.2	286	40.0		17.7	54	07	49	26	5	11	49	10
4	236	27.4		42.4	301	08.6		19.0	52	06	46	21	4	53	50	11
5	251	27.4	-13	41.5	315	37.2	-28	20.2	50	6	04	6	42	4	37	51
6	266	27.4	-13	40.7	330	05.8	-28	21.2	45	6	01	6	35	4	07	51
7	281	27.4		39.9	344	34.4		22.1	40	5	57	29	6	57	3	43
8	296	27.5		39.1	359	03.0		22.8	35	53	23	49	23	52	12	44
9	311	27.5		38.2	374	31.5		23.4	30	50	18	42	3	07	51	13
10	326	27.5		37.4	389	00.0		23.9	20	42	6	08	31	2	38	52
11	341	27.5	-13	36.6	402	28.5	-28	24.2	10 N	5	34	5	59	2	14	52
12	356	27.5	-13	35.7	415	56.9	-28	24.4	0	5	25	5	49	1	51	53
13	11	27.5		34.9	428	25.4		24.4	10 S	14	39	6	01	29	52	14
14	26	27.5		34.0	441	53.8		24.3	20	5	00	27	5	50	1	05
15	41	27.5		33.2	454	22.2		24.1	30	4	43	13	38	0	37	52
16	56	27.5		32.4	467	50.6		23.7	35	32	5	04	31	20	52	15
17	71	27.5	-13	31.5	480	18.9	-28	23.2	40	4	18	4	53	5	22	0
18	86	27.5	-13	30.7	493	47.3	-28	22.5	45	4	02	4	41	5	13	**
19	101	27.6		29.9	506	15.7		21.7	50	3	40	25	5	01	23	59
20	116	27.6		29.0	519	44.0		20.8	52	29	18	4	56	44	65	17
21	131	27.6		28.2	532	12.3		19.7	54	16	09	50	26	67	35	42
22	146	27.6		27.3	545	40.7		18.4	56	3	02	4	00	43	23	05
23	161	27.6		26.5	558	09.0		17.1	58	2	44	3	49	35	22	38
24	176	27.6	-13	25.7	571	37.3	-28	15.5	60 S	2	21	3	36	4	27	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 29.4 ^m		Mag: -3.9 PMG: 12 ^h 50 ^m		Mag: +1.1 PMG: 11 ^h 44 ^m		Mag: -2.6 PMG: 21 ^h 39 ^m		Mag: +1.0 PMG: 14 ^h 32 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	142	03.6	167	33.7	-12	08.3	183	54.5	-17	15.4
1	157	06.1	182	33.2		07.2	198	55.0		14.8
2	172	08.5	197	32.7		06.1	213	55.5		14.2
3	187	11.0	212	32.1		05.0	228	56.0		13.6
4	202	13.4	227	31.6		03.8	243	56.5		13.1
5	217	15.9	242	31.1	-12	02.7	258	57.0	-17	12.5
6	232	18.4	257	30.6	-12	01.6	273	57.5	-17	11.9
7	247	20.8	272	30.0	-12	00.5	288	58.0		11.3
8	262	23.3	287	29.5	-11	59.4	303	58.5		10.7
9	277	25.8	302	29.0		58.2	318	59.0		10.2
10	292	28.2	317	28.5		57.1	333	59.5		09.6
11	307	30.7	332	27.9	-11	56.0	349	00.0	-17	09.0
12	322	33.2	347	27.4	-11	54.9	4	00.5	-17	08.4
13	337	35.6	2	26.9		53.7	19	01.0		07.8
14	352	38.1	17	26.4		52.6	34	01.5		07.3
15	7	40.6	32	25.9		51.5	49	02.0		06.7
16	22	43.0	47	25.3		50.4	64	02.5		06.1
17	37	45.5	62	24.8	-11	49.2	79	03.0	-17	05.5
18	52	47.9	77	24.3	-11	48.1	94	03.5	-17	04.9
19	67	50.4	92	23.8		47.0	109	04.0		04.3
20	82	52.9	107	23.3		45.9	124	04.5		03.8
21	97	55.3	122	22.7		44.7	139	05.0		03.2
22	112	57.8	137	22.2		43.6	154	05.5		02.6
23	128	00.3	152	21.7		42.5	169	06.0		02.0
24	143	02.7	167	21.2	-11	41.4	184	06.5	-17	01.4
Dif	—		-5	+11			+5	+6		
									+27	0
									+22	+

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG:12 ^h 14.1 ^m				Edad: 25.2 ^d SD: 14'9 PMG: 8 ^h 56 ^m												
	hG ☉		Dec		hG ☾		Dif				Dec		Dif				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	27.6	-13	25.7	230	37.3	-28	15.5	60 N	16	46	17	30	18	19	7	24
1	191	27.6		24.8	245	05.6		13.9	58	53		34	21	6	47	11	09
2	206	27.6		24.0	259	33.9		12.1	56	16	59	38	22		21	33	35
3	221	27.7		23.2	274	02.2		10.1	54	17	05	42	24	6	00	36	11
4	236	27.7		22.3	288	30.5		08.0	52	10		45	25	5	43	38	12
5	251	27.7	-13	21.5	302	58.8	-28	05.8	50	17	15	17	48	18	26	5	28
6	266	27.7	-13	20.6	317	27.1	-28	03.4	45	17	25	17	55	18	30	4	58
7	281	27.7		19.8	331	55.4	-28	00.9	40	33		18	01	33		34	46
8	296	27.7		18.9	346	23.7	-27	58.3	35	41		07	36	4	15	47	40
9	311	27.7		18.1	0	52.0		55.4	30	47		12	40	3	58	49	13
10	326	27.8		17.3	15	20.3		52.5	20	17	58	21	47	30	51	14	23
11	341	27.8	-13	16.4	29	48.6	-27	49.4	10 N	18	08	18	30	18	55	3	06
12	356	27.8	-13	15.6	44	17.0	-27	46.2	0	18	18	18	39	19	03	2	44
13	11	27.8		14.7	58	45.3		42.8	10 S	27		18	49	14		2	21
14	26	27.8		13.9	73	13.7		39.3	20	37		19	00	27		1	57
15	41	27.8		13.0	87	42.0		35.6	30	49		14	44			29	59
16	56	27.9		12.2	102	10.4		31.8	35	18	56	23	19	55	1	12	60
17	71	27.9	-13	11.3	116	38.8	-27	27.9	40	19	04	19	33	20	07	0	53
18	86	27.9	-13	10.5	131	07.2	-27	23.8	45	19	13	19	45	20	24	0	29
19	101	27.9		09.7	145	35.6		19.6	50	24		20	00	45		**	**
20	116	27.9		08.8	160	04.1		15.2	52	30		07	20	55		**	**
21	131	27.9		08.0	174	32.5		10.7	54	35		15	21	07		**	**
22	146	28.0		07.1	189	01.0		06.1	56	42		24	21			**	**
23	161	28.0		06.3	203	29.5	-27	01.3	58	49		35	38			23	51
24	176	28.0	-13	05.4	217	58.0	-26	56.4	60 S	19	57	20	47	21	59	23	21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 25.4 ^m		Mag: -3.9 PMG: 12 ^h 51 ^m		Mag: +1.2 PMG: 11 ^h 43 ^m		Mag: -2.6 PMG: 21 ^h 34 ^m		Mag: +1.0 PMG: 14 ^h 29 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	143	02.7	167	21.2	-11	41.4	184	06.5	-17	01.4
1	158	05.2	182	20.7		40.2	199	07.0		00.8
2	173	07.7	197	20.2		39.1	214	07.5	-17	00.3
3	188	10.1	212	19.6		38.0	229	08.0	-16	59.7
4	203	12.6	227	19.1		36.8	244	08.5		59.1
5	218	15.1	242	18.6	-11	35.7	259	09.0	-16	58.5
6	233	17.5	257	18.1	-11	34.6	274	09.5	-16	57.9
7	248	20.0	272	17.6		33.4	289	10.0		57.3
8	263	22.4	287	17.1		32.3	304	10.5		56.7
9	278	24.9	302	16.6		31.2	319	11.0		56.1
10	293	27.4	317	16.1		30.0	334	11.5		55.6
11	308	29.8	332	15.5	-11	28.9	349	12.0	-16	55.0
12	323	32.3	347	15.0	-11	27.8	4	12.5	-16	54.4
13	338	34.8	2	14.5		26.6	19	13.0		53.8
14	353	37.2	17	14.0		25.5	34	13.6		53.2
15	8	39.7	32	13.5		24.3	49	14.1		52.6
16	23	42.2	47	13.0		23.2	64	14.6		52.0
17	38	44.6	62	12.5	-11	22.1	79	15.1	-16	51.4
18	53	47.1	77	12.0	-11	20.9	94	15.6	-16	50.8
19	68	49.5	92	11.5		19.8	109	16.1		50.3
20	83	52.0	107	11.0		18.6	124	16.6		49.7
21	98	54.5	122	10.5		17.5	139	17.1		49.1
22	113	56.9	137	09.9		16.4	154	17.6		48.5
23	128	59.4	152	09.4		15.2	169	18.1		47.9
24	144	01.9	167	08.9	-11	14.1	184	18.6	-16	47.3
Dif	—		-5 +11		+5 +6		+27 0		+22 +	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG:12 ^h 14.1 ^m			Edad: 26.2 ^d SD: 15/0 PMG: 9 ^h 49 ^m PHE 4^h: 55/1 12^h: 55/3 20^h: 55/5 R°: 51^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	176	28.0	-13	05.4	217	58.0	-26	56.4	51	60 N	6 08	6 57	7 41	7 40	6	12 05	99
1	191	28.0		04.6	232	26.6		51.3	52	58	07	53	34	7 13	15	31	91
2	206	28.0		03.7	246	55.1		46.1	53	56	05	49	28	6 52	20	12 52	86
3	221	28.1		02.9	261	23.7		40.8	53	54	04	45	22	35	23	13 09	8
4	236	28.1		02.0	275	52.3		35.3	55	52	02	42	17	20	27	24	78
5	251	28.1	-13	01.2	290	21.0	-26	29.7	56	50	6 01	6 39	7 12	6 07	29	13 36	76
6	266	28.1	-13	00.3	304	49.7	-26	23.9	58	45	5 58	6 32	7 03	5 40	34	14 02	71
7	281	28.1	-12	59.5	319	18.4		18.0	59	40	55	26	6 54	19	37	23	67
8	296	28.2		58.6	333	47.1		12.0	60	35	51	21	47	5 01	40	40	64
9	311	28.2		57.8	348	15.8	-26	05.8	62	30	48	16	41	4 46	42	14 55	61
10	326	28.2		56.9	2	44.6	-25	59.5	63	20	41	6 07	30	4 20	45	15 20	57
11	341	28.2	-12	56.1	17	13.5	-25	53.1	64	10 N	5 34	5 58	6 20	3 57	49	15 41	54
12	356	28.3	-12	55.2	31	42.3	-25	46.5	66	0	5 25	5 49	6 11	3 36	51	16 01	50
13	11	28.3		54.4	46	11.2		39.8	67	10 S	14	40	6 01	3 15	54	21	47
14	26	28.3		53.5	60	40.1		33.0	68	20	5 02	28	5 51	2 52	57	16 42	44
15	41	28.3		52.6	75	09.1		26.0	70	30	4 45	14	39	26	60	17 06	40
16	56	28.4		51.8	89	38.1		18.9	71	35	34	5 06	33	2 11	62	20	38
17	71	28.4	-12	50.9	104	07.1	-25	11.7	72	40	4 21	4 56	5 25	1 53	64	17 37	34
18	86	28.4	-12	50.1	118	36.2	-25	04.3	74	45	4 05	4 44	5 16	1 31	68	17 56	31
19	101	28.4		49.2	133	05.3	-24	56.8	75	50	3 44	29	5 05	1 03	72	18 21	25
20	116	28.5		48.4	147	34.4		49.2	76	52	34	22	4 59	0 49	75	32	23
21	131	28.5		47.5	162	03.6		41.4	78	54	22	14	54	33	78	18 46	19
22	146	28.5		46.7	176	32.8		33.5	79	56	3 08	4 05	47	0 15	81	19 01	16
23	161	28.5		45.8	191	02.1		25.5	80	58	2 51	3 54	40	** ** *	**	19	11
24	176	28.6	-12	44.9	205	31.4	-24	17.4	81	60 S	2 30	3 42	4 32	** ** *	**	19 41	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 14 ^h 21.5 ^m		Mag: -3.9 PMG: 12 ^h 52 ^m		Mag: +1.1 PMG: 11 ^h 42 ^m		Mag: -2.5 PMG: 21 ^h 30 ^m		Mag: +1.0 PMG: 14 ^h 25 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	144	01.9	167	08.9	-11	14.1	184	18.6	-16	47.3	
1	159	04.3	182	08.4		12.9	199	19.1		46.7	
2	174	06.8	197	07.9		11.8	214	19.6		46.1	
3	189	09.3	212	07.4		10.7	229	20.1		45.5	
4	204	11.7	227	06.9		09.5	244	20.6		44.9	
5	219	14.2	242	06.4	-11	08.4	259	21.1	-16	44.3	
6	234	16.7	257	05.9	-11	07.2	274	21.6	-16	43.7	
7	249	19.1	272	05.4		06.1	289	22.1		43.1	
8	264	21.6	287	04.9		04.9	304	22.7		42.6	
9	279	24.0	302	04.4		03.8	319	23.2		42.0	
10	294	26.5	317	03.9		02.6	334	23.7		41.4	
11	309	29.0	332	03.4	-11	01.5	349	24.2	-16	40.8	
12	324	31.4	347	02.9	-11	00.3	4	24.7	-16	40.2	
13	339	33.9	2	02.4	-10	59.2	19	25.2		39.6	
14	354	36.4	17	01.9		58.0	34	25.7		39.0	
15	9	38.8	32	01.4		56.9	49	26.2		38.4	
16	24	41.3	47	00.9		55.7	64	26.7		37.8	
17	39	43.8	62	00.4	-10	54.6	79	27.2	-16	37.2	
18	54	46.2	76	59.9	-10	53.4	94	27.7	-16	36.6	
19	69	48.7	91	59.4		52.3	109	28.2		36.0	
20	84	51.2	106	58.9		51.1	124	28.7		35.4	
21	99	53.6	121	58.4		50.0	139	29.3		34.8	
22	114	56.1	136	57.9		48.8	154	29.8		34.2	
23	129	58.5	151	57.4		47.7	169	30.3		33.6	
24	145	01.0	166	56.9	-10	46.5	184	30.8	-16	33.0	
Dif	—		-5	+11		+5	+6	+27	0	+22	+1

UT	SOL				● LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG:12 ^h 14.1 ^m				Edad: 27.2 ^d SD: 15/1 PMG: 10 ^h 40 ^m PHE { 4 ^h : 55/7 12 ^h : 55/8 20 ^h : 56/0 R°: 50 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°		
h	° /	° /	° /		° /		°	h m	h m	h m	h m	h m	h m	h m	h m	
0	176 28.6	-12 44.9	205 31.4	104	-24 17.4	83	60 N	16 51	17 35	18 24	7 46	4	13 44	101		
1	191 28.6	44.1	220 00.8	104	09.1	84	58	16 58	39	25	28	9	14 02	95		
2	206 28.6	43.2	234 30.2	104	-24 00.7	85	56	17 04	43	26	7 12	14	18 89			
3	221 28.7	42.4	248 59.6	105	-23 52.2	87	54	09	46	27	6 58	18	30 86			
4	236 28.7	41.5	263 29.1	105	43.5	88	52	14	49	28	47	20	42 82			
5	251 28.7	-12 40.7	277 58.6	105	-23 34.7	89	50	17 18	17 52	18 30	6 36	23	14 52	79		
6	266 28.7	-12 39.8	292 28.1	107	-23 25.8	90	45	17 28	17 58	18 32	6 14	29	15 13	74		
7	281 28.8	38.9	306 57.8	107	16.8	91	40	36	18 03	35	5 56	33	30 69			
8	296 28.8	38.1	321 27.4	106	-23 07.7	93	35	43	08	38	41	36	44 66			
9	311 28.8	37.2	335 57.1	107	-22 58.4	94	30	49	13	41	28	39	15 56	63		
10	326 28.9	36.4	350 26.8	107	49.0	95	20	17 59	22	48	5 05	44	16 17	58		
11	341 28.9	-12 35.5	4 56.6	108	-22 39.5	96	10 N	18 09	18 30	18 55	4 46	47	16 35	54		
12	356 28.9	-12 34.6	19 26.5	109	-22 29.9	98	0	18 17	18 39	19 03	4 27	51	16 51	50		
13	11 29.0	33.8	33 56.3	108	20.1	98	10 S	26	48	13	4 09	55	17 08	46		
14	26 29.0	32.9	48 26.3	110	10.3	98	20	36	18 59	26	3 49	59	26 41			
15	41 29.0	32.0	62 56.2	109	-22 00.3	100	30	47	19 12	42	26	63	46 37			
16	56 29.0	31.2	77 26.2	110	-21 50.2	101	35	18 54	20	19 52	3 13	66	17 58	33		
17	71 29.1	-12 30.3	91 56.3	111	-21 40.0	102	40	19 01	19 30	20 04	2 57	69	18 11	30		
18	86 29.1	-12 29.5	106 26.4	111	-21 29.7	103	45	19 10	19 42	20 20	2 39	73	18 27	26		
19	101 29.1	28.6	120 56.6	112	19.2	105	50	21	19 56	40	15	79	46 21			
20	116 29.2	27.7	135 26.8	112	-21 08.7	105	52	26	20 03	20 50	2 04	81	18 55	18		
21	131 29.2	26.9	149 57.0	112	-20 58.0	107	54	31	10	21 01	1 51	85	19 05	16		
22	146 29.2	26.0	164 27.3	113	47.2	108	56	37	19	14	36	89	17 12			
23	161 29.3	25.1	178 57.7	114	36.4	108	58	44	29	30	1 19	94	30 8			
24	176 29.3	-12 24.3	193 28.1	114	-20 25.4	110	60 S	19 52	20 41	21 50	0 57	101	19 45	3		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 17.6 ^m		Mag: -3.9 PMG: 12 ^h 53 ^m		Mag: +1.1 PMG: 11 ^h 42 ^m		Mag: -2.5 PMG: 21 ^h 26 ^m		Mag: +1.0 PMG: 14 ^h 22 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /		° /		° /		° /	
0	145 01.0	166 56.9	-10 46.5	184 30.8	-16 33.0	37 35.2	+22 48.1	144 03.7	-1 55.6	
1	160 03.5	181 56.4	45.4	199 31.3	32.4	52 37.9	48.1	159 05.9	55.5	
2	175 05.9	196 55.9	44.2	214 31.8	31.8	67 40.6	48.1	174 08.1	55.4	
3	190 08.4	211 55.4	43.0	229 32.3	31.2	82 43.2	48.1	189 10.3	55.3	
4	205 10.9	226 54.9	41.9	244 32.8	30.6	97 45.9	48.2	204 12.6	55.1	
5	220 13.3	241 54.4	-10 40.7	259 33.3	-16 30.0	112 48.6	+22 48.2	219 14.8	-1 55.0	
6	235 15.8	256 54.0	-10 39.6	274 33.9	-16 29.4	127 51.2	+22 48.2	234 17.0	-1 54.9	
7	250 18.3	271 53.5	38.4	289 34.4	28.8	142 53.9	48.2	249 19.2	54.8	
8	265 20.7	286 53.0	37.3	304 34.9	28.2	157 56.6	48.3	264 21.4	54.7	
9	280 23.2	301 52.5	36.1	319 35.4	27.6	172 59.2	48.3	279 23.6	54.6	
10	295 25.7	316 52.0	34.9	334 35.9	27.0	188 01.9	48.3	294 25.8	54.5	
11	310 28.1	331 51.5	-10 33.8	349 36.4	-16 26.4	203 04.6	+22 48.3	309 28.0	-1 54.3	
12	325 30.6	346 51.0	-10 32.6	4 36.9	-16 25.8	218 07.2	+22 48.4	324 30.2	-1 54.2	
13	340 33.0	1 50.5	31.5	19 37.4	25.2	233 09.9	48.4	339 32.5	54.1	
14	355 35.5	16 50.0	30.3	34 37.9	24.6	248 12.6	48.4	354 34.7	54.0	
15	10 38.0	31 49.5	29.1	49 38.5	24.0	263 15.2	48.4	9 36.9	53.9	
16	25 40.4	46 49.0	28.0	64 39.0	23.4	278 17.9	48.5	24 39.1	53.8	
17	40 42.9	61 48.6	-10 26.8	79 39.5	-16 22.8	293 20.6	+22 48.5	39 41.3	-1 53.7	
18	55 45.4	76 48.1	-10 25.6	94 40.0	-16 22.2	308 23.2	+22 48.5	54 43.5	-1 53.5	
19	70 47.8	91 47.6	24.5	109 40.5	21.6	323 25.9	48.5	69 45.7	53.4	
20	85 50.3	106 47.1	23.3	124 41.0	21.0	338 28.6	48.6	84 47.9	53.3	
21	100 52.8	121 46.6	22.2	139 41.5	20.4	353 31.2	48.6	99 50.1	53.2	
22	115 55.2	136 46.1	21.0	154 42.1	19.7	8 33.9	48.6	114 52.4	53.1	
23	130 57.7	151 45.6	19.8	169 42.6	19.1	23 36.6	48.6	129 54.6	53.0	
24	146 00.1	166 45.2	-10 18.7	184 43.1	-16 18.5	38 39.2	+22 48.7	144 56.8	-1 52.9	
Dif	—	-5	+12	+5	+6	+27	0	+22	+1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG:12 ^h 14.0 ^m				Edad: 28.2 ^d SD: 15'3 PMG: 11 ^h 29 ^m PHE { 4 ^h : 56'2 12 ^h : 56'4 20 ^h : 56'6 R°: 47 ^m											
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	176	29.3	-12	24.3	193	28.1	-20	25.4	60 N	6 03	6 52	7 35	7 48	1	15	24
1	191	29.4		23.4	207	58.5		14.3	58	02	48	29	36	5	35	93
2	206	29.4		22.5	222	29.0	-20	03.1	56	01	44	23	25	8	46	88
3	221	29.4		21.7	236	59.5	-19	51.8	54	6 00	41	18	15	12	15	55
4	236	29.5		20.8	251	30.1		40.3	52	5 59	38	13	7 06	15	16	03
5	251	29.5	-12	19.9	266	00.7	-19	28.8	50	5 58	6 36	7 09	6 58	18	16	10
6	266	29.5	-12	19.1	280	31.4	-19	17.2	45	5 55	6 29	6 59	6 41	23	16	25
7	281	29.6		18.2	295	02.1	-19	05.5	40	52	24	52	27	27	38	69
8	296	29.6		17.3	309	32.9	-18	53.6	35	49	19	45	16	30	49	64
9	311	29.6		16.5	324	03.7		41.7	30	47	15	39	6 05	34	16	58
10	326	29.7		15.6	338	34.5		29.7	20	40	6 06	29	5 47	39	17	14
11	341	29.7	-12	14.7	353	05.4	-18	17.5	10 N	5 33	5 58	6 19	5 32	43	17	27
12	356	29.8	-12	13.9	7	36.4	-18	05.3	0	5 25	5 49	6 11	5 17	48	17	40
13	11	29.8		13.0	22	07.4	-17	53.0	10 S	15	40	6 02	5 02	52	17	53
14	26	29.8		12.1	36	38.4		40.6	20	5 03	29	5 52	4 46	57	18	06
15	41	29.9		11.2	51	09.5		28.1	30	4 47	16	41	28	62	21	32
16	56	29.9		10.4	65	40.6		15.5	35	36	5 08	35	17	65	30	29
17	71	30.0	-12	09.5	80	11.8	-17	02.8	40	4 24	4 59	5 27	4 05	69	18	40
18	86	30.0	-12	08.6	94	43.0	-16	50.0	45	4 09	4 47	5 19	3 50	74	18	52
19	101	30.0		07.8	109	14.2		37.1	50	3 49	33	08	33	78	19	06
20	116	30.1		06.9	123	45.5		24.1	52	39	26	5 03	24	81	12	14
21	131	30.1		06.0	138	16.8	-16	11.1	54	28	18	4 58	15	84	19	11
22	146	30.2		05.1	152	48.2	-15	57.9	56	3 15	10	52	3 04	88	27	8
23	161	30.2		04.3	167	19.6		44.7	58	2 59	4 00	45	2 51	93	36	4
24	176	30.2	-12	03.4	181	51.1	-15	31.4	60 S	2 39	3 48	4 38	2 37	98	19	46
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 14 ^h 13.7 ^m		Mag: -3.9 PMG: 12 ^h 53 ^m		Mag: +1.1 PMG: 11 ^h 41 ^m		Mag: -2.5 PMG: 21 ^h 22 ^m		Mag: +1.0 PMG: 14 ^h 18 ^m							
	hG ♊		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	146	00.1	166	45.2	-10	18.7	38	39.2	+22	48.7						
1	161	02.6	181	44.7		17.5	53	41.9		48.7						
2	176	05.1	196	44.2		16.3	68	44.5		48.7						
3	191	07.5	211	43.7		15.2	83	47.2		48.7						
4	206	10.0	226	43.2		14.0	98	49.9		48.8						
5	221	12.5	241	42.7	-10	12.8	113	52.5	+22	48.8						
6	236	14.9	256	42.2	-10	11.7	128	55.2	+22	48.8						
7	251	17.4	271	41.8		10.5	143	57.8		48.8						
8	266	19.9	286	41.3		09.3	159	00.5		48.9						
9	281	22.3	301	40.8		08.1	174	03.2		48.9						
10	296	24.8	316	40.3		07.0	189	05.8		48.9						
11	311	27.3	331	39.8	-10	05.8	204	08.5	+22	48.9						
12	326	29.7	346	39.4	-10	04.6	219	11.1	+22	49.0						
13	341	32.2	1	38.9		03.5	234	13.8		49.0						
14	356	34.6	16	38.4		02.3	249	16.5		49.0						
15	11	37.1	31	37.9	-10	01.1	264	19.1		49.0						
16	26	39.6	46	37.4	-9	59.9	279	21.8		49.1						
17	41	42.0	61	37.0	-9	58.8	294	24.4	+22	49.1						
18	56	44.5	76	36.5	-9	57.6	309	27.1	+22	49.1						
19	71	47.0	91	36.0		56.4	324	29.7		49.1						
20	86	49.4	106	35.5		55.2	339	32.4		49.2						
21	101	51.9	121	35.0		54.1	354	35.1		49.2						
22	116	54.4	136	34.6		52.9	9	37.7		49.2						
23	131	56.8	151	34.1		51.7	24	40.4		49.2						
24	146	59.3	166	33.6	-9	50.5	39	43.0	+22	49.3						
Dif	—		-5 +12		+5 +6		+27		0		+22		+1			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16/2 PMG:12 ^h 13.9 ^m				Edad: 29.2 ^d SD: 15/5 PMG: 12 ^h 16 ^m PHE { 4 ^h : 56/8 12 ^h : 57/0 20 ^h : 57/2 Rº: 47 ^m																
	hG ☉	Dec			hG ☾	Dif					Civil		Náutico	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m		
0	176	30.2	-12	03.4	181	51.1	-15	31.4	60 N	16	56	17	40	18	28	7	49	1	17	01	96
1	191	30.3		02.5	196	22.6		18.0	58	17	03		43		29		41	4		08	92
2	206	30.3		01.6	210	54.1	-15	04.5	56		08		47		30		33	8		14	89
3	221	30.4	-12	00.8	225	25.7	-14	50.9	54		13		50		31		27	11		19	86
4	236	30.4	-11	59.9	239	57.3		37.3	52		18		52		32		21	14		24	83
5	251	30.5	-11	59.0	254	28.9	-14	23.5	50	17	22	17	55	18	33	7	16	16	17	29	80
6	266	30.5	-11	58.1	269	00.6	-14	09.7	45	17	31	18	01	18	35	7	04	21	17	39	74
7	281	30.5		57.3	283	32.3	-13	55.9	40		38		06		37		6	54	26	47	70
8	296	30.6		56.4	298	04.1		41.9	35		44		10		40		46	29		53	66
9	311	30.6		55.5	312	35.9		27.9	30	17	50		15		43		39	32	17	59	63
10	326	30.7		54.6	327	07.7	-13	13.8	20	18	00		23		48		26	38	18	10	56
11	341	30.7	-11	53.8	341	39.6	-12	59.6	10 N	18	09	18	30	18	55	6	15	43	18	18	52
12	356	30.8	-11	52.9	356	11.5	-12	45.3	0	18	17	18	38	19	03	6	05	47	18	27	47
13	11	30.8		52.0	10	43.4		31.0	10 S		26		47		12	5	54	52		35	42
14	26	30.9		51.1	25	15.3		16.6	20		35	18	58	24		43	57		44	37	
15	41	30.9		50.2	39	47.3	-12	02.2	30		46	19	10	40		30	63		53	32	
16	56	31.0		49.4	54	19.3	-11	47.6	35		52		18	19	50	22	66	18	59	29	
17	71	31.0	-11	48.5	68	51.4	-11	33.0	40	18	59	19	27	20	01	5	14	70	19	05	25
18	86	31.0	-11	47.6	83	23.4	-11	18.4	45	19	07	19	38	20	16	5	04	74	19	13	20
19	101	31.1		46.7	97	55.5	-11	03.7	50		17		52		35	4	51	80		22	15
20	116	31.1		45.8	112	27.6	-10	48.9	52		22	19	58		45	45	83		26	13	
21	131	31.2		45.0	126	59.8		34.0	54		27	20	06	20	55	39	86		30	10	
22	146	31.2		44.1	141	32.0		19.1	56		32	14	21	08		32	89		35	7	
23	161	31.3		43.2	156	04.1	-10	04.2	58		39		23	23		24	93		40	5	
24	176	31.3	-11	42.3	170	36.4	-9	49.1	60 S	19	46	20	34	21	41	4	15	97	19	46	1
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG 14 ^h 09.7 ^m			Mag: -3.9 PMG: 12 ^h 54 ^m			Mag: +1.1 PMG: 11 ^h 40 ^m			Mag: -2.5 PMG: 21 ^h 17 ^m			Mag: +1.0 PMG: 14 ^h 15 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	146	59.3	166	33.6	-9	50.5	184	55.5	-16	03.9	39	43.0	+22	49.3	145	49.8	-1	50.1			
1	162	01.8	181	33.1		49.4	199	56.0		03.3	54	45.7		49.3	160	52.0		50.0			
2	177	04.2	196	32.7		48.2	214	56.5		02.7	69	48.3		49.3	175	54.2		49.9			
3	192	06.7	211	32.2		47.0	229	57.0		02.1	84	51.0		49.3	190	56.4		49.8			
4	207	09.1	226	31.7		45.8	244	57.5		01.4	99	53.6		49.4	205	58.6		49.6			
5	222	11.6	241	31.2	-9	44.6	259	58.1	-16	00.8	114	56.3	+22	49.4	221	00.8	-1	49.5			
6	237	14.1	256	30.8	-9	43.5	274	58.6	-16	00.2	129	58.9	+22	49.4	236	03.0	-1	49.4			
7	252	16.5	271	30.3		42.3	289	59.1	-15	59.6	145	01.6		49.4	251	05.2		49.3			
8	267	19.0	286	29.8		41.1	304	59.6		59.0	160	04.2		49.5	266	07.5		49.2			
9	282	21.5	301	29.3		39.9	320	00.1		58.4	175	06.9		49.5	281	09.7		49.1			
10	297	23.9	316	28.9		38.7	335	00.7		57.7	190	09.5		49.5	296	11.9		49.0			
11	312	26.4	331	28.4	-9	37.6	350	01.2	-15	57.1	205	12.2	+22	49.5	311	14.1	-1	48.8			
12	327	28.9	346	27.9	-9	36.4	5	01.7	-15	56.5	220	14.8	+22	49.6	326	16.3	-1	48.7			
13	342	31.3	1	27.5		35.2	20	02.2		55.9	235	17.5		49.6	341	18.5		48.6			
14	357	33.8	16	27.0		34.0	35	02.8		55.3	250	20.1		49.6	356	20.7		48.5			
15	12	36.2	31	26.5		32.8	50	03.3		54.7	265	22.8		49.6	11	22.9		48.4			
16	27	38.7	46	26.1		31.6	65	03.8		54.0	280	25.4		49.7	26	25.1		48.3			
17	42	41.2	61	25.6	-9	30.5	80	04.3	-15	53.4	295	28.1	+22	49.7	41	27.3	-1	48.2			
18	57	43.6	76	25.1	-9	29.3	95	04.8	-15	52.8	310	30.7	+22	49.7	56	29.5	-1	48.0			
19	72	46.1	91	24.6		28.1	110	05.4		52.2	325	33.4		49.7	71	31.7		47.9			
20	87	48.6	106	24.2		26.9	125	05.9		51.6	340	36.0		49.7	86	33.9		47.8			
21	102	51.0	121	23.7		25.7	140	06.4		50.9	355	38.7		49.8	101	36.1		47.7			
22	117	53.5	136	23.2		24.5	155	06.9		50.3	10	41.3		49.8	116	38.4		47.6			
23	132	56.0	151	22.8		23.3	170	07.4		49.7	25	44.0		49.8	131	40.6		47.5			
24	147	58.4	166	22.3	-9	22.1	185	08.0	-15	49.1	40	46.6	+22	49.8	146	42.8	-1	47.3			
Dif	—		-5		+12		+5		+6		+27		0		+22		+				

UT	SOL				LUNA								Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 16/2 PMG:12 ^h 13.9 ^m				Edad: 0.5 ^d SD: 15/6 PMG: 13 ^h 02 ^m																				
	hG ☉		Dec		hG ☾		Dif		Dec		Dif			Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m			
0	176	31.3	-11	42.3	170	36.4	-9	49.1	150	34.1	150	58	57	6	47	7	30	7	48	**	18	36	95		
1	191	31.4		41.4	185	08.6			132			57		43		24		44		3		39	91		
2	206	31.4		40.6	199	40.9			133			56		40		18		40		6		41	88		
3	221	31.5		39.7	214	13.1	-9	03.7	152			54		37		14		36		9		44	84		
4	236	31.5		38.8	228	45.4	-8	48.5	152			52		34		09		33		11		46	81		
5	251	31.6	-11	37.9	243	17.8	-8	33.2	153			50		32		7	05	7	30	14		18	48	79	
6	266	31.6	-11	37.0	257	50.1	-8	17.9	153			45		26		6	56	7	24	19		18	52	73	
7	281	31.7		36.1	272	22.5	-8	02.5	154			40		21		49		19		23		55	69		
8	296	31.7		35.3	286	54.8	-7	47.0	155			35		17		43		14		27		18	58	65	
9	311	31.8		34.4	301	27.2			155			30		13		37		10		30		19	01	61	
10	326	31.8		33.5	315	59.6			155			20		39		6	05	27		7	03	36		05	56
11	341	31.9	-11	32.6	330	32.0	-7	00.4	156			10 N		57		6	19	6	57	40		19	09	50	
12	356	32.0	-11	31.7	345	04.4	-6	44.8	156			0		49		6	10	6	51	45		19	12	46	
13	11	32.0		30.8	359	36.9			157			10 S		41		6	02	45		50		16	41		
14	26	32.1		29.9	14	09.3	-6	13.4	157			20		30		5	53	38		56		20	35		
15	41	32.1		29.1	28	41.8	-5	57.7	157			30		18		43		31		62		24	30		
16	56	32.2		28.2	43	14.2			158			35		10		37		27		65		26	27		
17	71	32.2	-11	27.3	57	46.7	-5	26.1	158			40		01		5	30	6	22	69		19	29	23	
18	86	32.3	-11	26.4	72	19.1	-5	10.2	159			45		50		5	21	6	17	73		19	32	18	
19	101	32.3		25.5	86	51.6	-4	54.4	158			50		37		12		10		79		36	13		
20	116	32.4		24.6	101	24.1			160			52		30		07		07		81		37	11		
21	131	32.4		23.7	115	56.6			159			54		23		5	02	03		85		39	8		
22	146	32.5		22.8	130	29.1	-4	06.5	160			56		15		4	56	6	00	87		41	6		
23	161	32.6		22.0	145	01.5	-3	50.5	160			58		06		50		5	55	91		43	3		
24	176	32.6	-11	21.1	159	34.0	-3	34.4	161			60 S		55		4	43	5	51	95		19	46	**	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 14 ^h 05.8 ^m		Mag: -3.9 PMG: 12 ^h 55 ^m			Mag: +1.1 PMG: 11 ^h 39 ^m			Mag: -2.5 PMG: 21 ^h 13 ^m			Mag: +1.0 PMG: 14 ^h 11 ^m														
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄														
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°											
0	147	58.4	166	22.3	-9	22.1	185	08.0	-15	49.1	40	46.6	+22	49.8	146	42.8	-1	47.3								
1	163	00.9	181	21.8		21.0	200	08.5		48.5	55	49.3		49.9	161	45.0		47.2								
2	178	03.4	196	21.4		19.8	215	09.0		47.8	70	51.9		49.9	176	47.2		47.1								
3	193	05.8	211	20.9		18.6	230	09.5		47.2	85	54.6		49.9	191	49.4		47.0								
4	208	08.3	226	20.4		17.4	245	10.1		46.6	100	57.2		49.9	206	51.6		46.9								
5	223	10.7	241	20.0	-9	16.2	260	10.6	-15	46.0	115	59.9	+22	50.0	221	53.8	-1	46.8								
6	238	13.2	256	19.5	-9	15.0	275	11.1	-15	45.4	131	02.5	+22	50.0	236	56.0	-1	46.7								
7	253	15.7	271	19.1		13.8	290	11.6		44.7	146	05.1		50.0	251	58.2		46.5								
8	268	18.1	286	18.6		12.6	305	12.2		44.1	161	07.8		50.0	267	00.4		46.4								
9	283	20.6	301	18.1		11.4	320	12.7		43.5	176	10.4		50.0	282	02.6		46.3								
10	298	23.1	316	17.7		10.2	335	13.2		42.9	191	13.1		50.1	297	04.8		46.2								
11	313	25.5	331	17.2	-9	09.1	350	13.7	-15	42.2	206	15.7	+22	50.1	312	07.0	-1	46.1								
12	328	28.0	346	16.7	-9	07.9	5	14.3	-15	41.6	221	18.4	+22	50.1	327	09.2	-1	46.0								
13	343	30.5	1	16.3		06.7	20	14.8		41.0	236	21.0		50.1	342	11.4		45.8								
14	358	32.9	16	15.8		05.5	35	15.3		40.4	251	23.6		50.2	357	13.6		45.7								
15	13	35.4	31	15.4		04.3	50	15.8		39.8	266	26.3		50.2	12	15.9		45.6								
16	28	37.9	46	14.9		03.1	65	16.4		39.1	281	28.9		50.2	27	18.1		45.5								
17	43	40.3	61	14.4	-9	01.9	80	16.9	-15	38.5	296	31.6	+22	50.2	42	20.3	-1	45.4								
18	58	42.8	76	14.0	-9	00.7	95	17.4	-15	37.9	311	34.2	+22	50.3	57	22.5	-1	45.3								
19	73	45.2	91	13.5	-8	59.5	110	17.9		37.3	326	36.8		50.3	72	24.7		45.1								
20	88	47.7	106	13.1		58.3	125	18.5		36.6	341	39.5		50.3	87	26.9		45.0								
21	103	50.2	121	12.6		57.1	140	19.0		36.0	356	42.1		50.3	102	29.1		44.9								
22	118	52.6	136	12.1		55.9	155	19.5		35.4	11	44.8		50.3	117	31.3		44.8								
23	133	55.1	151	11.7		54.7	170	20.0		34.7	26	47.4		50.4	132	33.5		44.7								
24	148	57.6	166	11.2	-8	53.5	185	20.6	-15	34.1	41	50.0	+22	50.4	147	35.7	-1	44.6								
Dif	—		-5			+12			+5			+6			+26			0			+22			+		

UT	SOL				● LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h /2 PMG: 12 ^h 13.8 ^m				Edad: 1.5 ^d PHE { 4 ^h : 57 ^m /9 12 ^h : 58 ^m /1 20 ^h : 58 ^m /2 PMG: 13 ^h 47 ^m R°: 48 ^m											
	hG ☉	Dec			hG ☾	Dif					Civil		Náutico	Hora	R°	Hora
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	176	32.6	-11	21.1	159	34.0	-3	34.4	60 N	17 01	17 45	18 33	7 47 1	20 11 99		
1	191	32.7		20.2	174	06.5		18.4	58	07	48	34	47 4	10 94		
2	206	32.7		19.3	188	39.0	-3	02.3	56	12	51	34	46 7	09 91		
3	221	32.8		18.4	203	11.4	-2	46.1	54	17	53	35	45 10	08 88		
4	236	32.8		17.5	217	43.9		30.0	52	21	56	35	44 13	07 85		
5	251	32.9	-11	16.6	232	16.4	-2	13.8	50	17 25	17 58	18 36	7 44 15	20 07 82		
6	266	33.0	-11	15.7	246	48.8	-1	57.7	45	17 33	18 03	18 38	7 43 20	20 05 77		
7	281	33.0		14.8	261	21.3		41.5	40	40	08	40	42 24	04 72		
8	296	33.1		13.9	275	53.7		25.2	35	46	12	42	41 28	03 68		
9	311	33.1		13.1	290	26.1	-1	09.0	30	17 52	16	44	40 31	02 65		
10	326	33.2		12.2	304	58.5	-0	52.7	20	18 01	23	49	39 37	20 01 58		
11	341	33.3	-11	11.3	319	30.9	-0	36.5	10 N	18 09	18 31	18 55	7 37 43	19 59 53		
12	356	33.3	-11	10.4	334	03.3	-0	20.2	0	18 17	18 38	19 03	7 36 48	19 58 48		
13	11	33.4		09.5	348	35.7	-0	03.9	10 S	25	47	12	35 52	57 43		
14	26	33.4		08.6	3	08.0	+0	12.4	20	34	18 56	23	34 58	55 38		
15	41	33.5		07.7	17	40.3		28.7	30	44	19 08	38	33 63	54 32		
16	56	33.6		06.8	32	12.6	+0	45.0	35	49	16	47	32 67	53 28		
17	71	33.6	-11	05.9	46	44.9	+1	01.3	40	18 56	19 24	19 58	7 31 71	19 52 24		
18	86	33.7	-11	05.0	61	17.2	+1	17.7	45	19 04	19 35	20 12	7 30 76	19 50 21		
19	101	33.7		04.1	75	49.4		34.0	50	13	48	31	29 81	49 15		
20	116	33.8		03.2	90	21.7	+1	50.3	52	17	19 54	39	28 84	48 13		
21	131	33.9		02.3	104	53.9	+2	06.7	54	22	20 01	20 50	28 87	47 11		
22	146	33.9		01.4	119	26.0		23.0	56	28	08	21 01	27 90	47 7		
23	161	34.0	-11	00.5	133	58.2		39.3	58	33	17	15	26 94	46 4		
24	176	34.1	-10	59.6	148	30.3	+2	55.6	60 S	19 40	20 28	21 32	7 26 97	19 45 0		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 14 ^h 01.9 ^m		Mag: -3.9 PMG: 12 ^h 56 ^m		Mag: +1.1 PMG: 11 ^h 38 ^m		Mag: -2.5 PMG: 21 ^h 09 ^m		Mag: +1.0 PMG: 14 ^h 08 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	
0	148	57.6	166	11.2	-8	53.5	185	20.6	-15	34.1	
1	164	00.0	181	10.8		52.3	200	21.1		33.5	
2	179	02.5	196	10.3		51.1	215	21.6		32.9	
3	194	05.0	211	09.8		49.9	230	22.2		32.2	
4	209	07.4	226	09.4		48.7	245	22.7		31.6	
5	224	09.9	241	08.9	-8	47.5	260	23.2	-15	31.0	
6	239	12.3	256	08.5	-8	46.3	275	23.7	-15	30.4	
7	254	14.8	271	08.0		45.1	290	24.3		29.7	
8	269	17.3	286	07.6		43.9	305	24.8		29.1	
9	284	19.7	301	07.1		42.7	320	25.3		28.5	
10	299	22.2	316	06.7		41.5	335	25.9		27.8	
11	314	24.7	331	06.2	-8	40.3	350	26.4	-15	27.2	
12	329	27.1	346	05.8	-8	39.1	5	26.9	-15	26.6	
13	344	29.6	1	05.3		37.9	20	27.4		25.9	
14	359	32.1	16	04.8		36.7	35	28.0		25.3	
15	14	34.5	31	04.4		35.5	50	28.5		24.7	
16	29	37.0	46	03.9		34.3	65	29.0		24.0	
17	44	39.5	61	03.5	-8	33.1	80	29.6	-15	23.4	
18	59	41.9	76	03.0	-8	31.9	95	30.1	-15	22.8	
19	74	44.4	91	02.6		30.7	110	30.6		22.2	
20	89	46.8	106	02.1		29.5	125	31.2		21.5	
21	104	49.3	121	01.7		28.3	140	31.7		20.9	
22	119	51.8	136	01.2		27.1	155	32.2		20.3	
23	134	54.2	151	00.8		25.9	170	32.7		19.6	
24	149	56.7	166	00.3	-8	24.6	185	33.3	-15	19.0	
Dif	—		-5	+12		+5	+6	+26	0	+22	+1

UT	SOL		LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG:12 ^h 13.7 ^m		Edad: 2.5 ^d PHE { 4 ^h : 58/3 12 ^h : 58/5 20 ^h : 58/6 PMG: 14 ^h 33 ^m Rº: 49 ^m														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	176	34.1	-10	59.6	148	30.3	+2	55.6	60 N	5	53	6	41	7	24	7	47
1	191	34.1		58.7	163	02.4	+3	11.9	58	53	38	19	49	3	43	97	
2	206	34.2		57.8	177	34.4		28.3	56	52	36	14	52	6	39	92	
3	221	34.2		56.9	192	06.4	+3	44.6	54	52	33	09	54	9	35	89	
4	236	34.3		56.0	206	38.4	+4	00.8	52	51	31	05	56	12	31	86	
5	251	34.4	-10	55.1	221	10.4	+4	17.1	50	5	51	6	28	7	57	15	
6	266	34.4	-10	54.3	235	42.3	+4	33.4	45	5	49	6	23	8	01	20	
7	281	34.5		53.4	250	14.2	+4	49.7	40	47	19	46	05	24	15	72	
8	296	34.6		52.5	264	46.0	+5	05.9	35	45	15	41	07	29	10	68	
9	311	34.6		51.6	279	17.8		22.1	30	43	11	35	10	32	21	05	
10	326	34.7		50.7	293	49.6		38.3	20	38	6	04	14	38	20	57	
11	341	34.8	-10	49.8	308	21.3	+5	54.5	10 N	5	32	5	57	6	18	8	18
12	356	34.8	-10	48.9	322	52.9	+6	10.7	0	5	25	5	49	6	10	8	22
13	11	34.9		48.0	337	24.6		26.8	10 S	16	41	6	02	26	53	38	44
14	26	35.0		47.1	351	56.1		42.9	20	5	05	31	5	54	30	58	
15	41	35.0		46.2	6	27.7	+6	59.0	30	4	50	20	44	35	64	24	33
16	56	35.1		45.3	20	59.2	+7	15.1	35	41	12	38	38	67	20	30	
17	71	35.2	-10	44.4	35	30.6	+7	31.1	40	4	30	5	04	5	32	8	41
18	86	35.2	-10	43.4	50	02.0	+7	47.1	45	4	16	4	53	5	24	8	44
19	101	35.3		42.5	64	33.3	+8	03.1	50	3	58	40	15	49	82	03	16
20	116	35.4		41.6	79	04.6		19.1	52	49	34	11	51	85	20	00	
21	131	35.5		40.7	93	35.8		35.0	54	39	28	06	53	88	19	56	
22	146	35.5		39.8	108	07.0	+8	50.8	56	27	20	5	01	56	91	53	7
23	161	35.6		38.9	122	38.1	+9	06.7	58	3	13	11	4	55	8	58	
24	176	35.7	-10	38.0	137	09.2	+9	22.5	60 S	2	56	4	01	4	48	9	02

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 57.9 ^m		Mag: -3.9 PMG: 12 ^h 56 ^m		Mag: +1.1 PMG: 11 ^h 37 ^m		Mag: -2.5 PMG: 21 ^h 05 ^m		Mag: +1.0 PMG: 14 ^h 04 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	149	56.7	166	00.3	185	33.3	42	53.3	148	28.6
1	164	59.2	180	59.9	200	33.8	57	55.9	163	30.8
2	180	01.6	195	59.4	215	34.3	72	58.5	178	33.0
3	195	04.1	210	59.0	230	34.9	88	01.2	193	35.2
4	210	06.6	225	58.5	245	35.4	103	03.8	208	37.4
5	225	09.0	240	58.1	260	35.9	118	06.4	223	39.6
6	240	11.5	255	57.7	275	36.5	133	09.0	238	41.8
7	255	13.9	270	57.2	290	37.0	148	11.7	253	44.0
8	270	16.4	285	56.8	305	37.5	163	14.3	268	46.2
9	285	18.9	300	56.3	320	38.1	178	16.9	283	48.4
10	300	21.3	315	55.9	335	38.6	193	19.5	298	50.6
11	315	23.8	330	55.4	350	39.1	208	22.2	313	52.8
12	330	26.3	345	55.0	5	39.7	223	24.8	328	55.0
13	345	28.7	0	54.5	20	40.2	238	27.4	343	57.2
14	0	31.2	15	54.1	35	40.7	253	30.0	358	59.4
15	15	33.7	30	53.6	50	41.3	268	32.7	14	01.6
16	30	36.1	45	53.2	65	41.8	283	35.3	29	03.8
17	45	38.6	60	52.8	80	42.3	298	37.9	44	06.0
18	60	41.1	75	52.3	95	42.9	313	40.5	59	08.3
19	75	43.5	90	51.9	110	43.4	328	43.2	74	10.5
20	90	46.0	105	51.4	125	43.9	343	45.8	89	12.7
21	105	48.4	120	51.0	140	44.5	358	48.4	104	14.9
22	120	50.9	135	50.5	155	45.0	13	51.0	119	17.1
23	135	53.4	150	50.1	170	45.6	28	53.7	134	19.3
24	150	55.8	165	49.7	185	46.1	43	56.3	149	21.5
Dif	—		-4	+12	+5	+6	+26	0	+22	+

UT	SOL			LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG:12 ^h 13.6 ^m			Edad: 3.5 ^d PHE { 4 ^h : 58/7 12 ^h : 58/8 20 ^h : 58/9 PMG: 15 ^h 22 ^m Rº: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº
h	° /	° /		° /		° /		°	h m	h m	h m	h m m	h m m	h m m	
0	176 35.7	-10 38.0		137 09.2		+9 22.5		60 N	17 07	17 50	18 38	7 46 2	23 30 109		
1	191 35.7		37.1	151 40.1	119		38.2	58	12	52	38	52 7	20 103		
2	206 35.8		36.2	166 11.1	120	+9	53.9	56	17	55	38	7 58 10	11 99		
3	221 35.9		35.3	180 42.0	119	+10	09.6	54	21	57	38	8 03 14	23 04 94		
4	236 36.0		34.4	195 12.8	118		25.2	52	25	17 59	39	08 16	22 57 91		
5	251 36.0	-10	33.5	209 43.5	117	+10	40.8	50	17 29	18 01	18 39	8 12 19	22 51 87		
6	266 36.1	-10	32.6	224 14.2	117	+10	56.3	45	17 36	18 06	18 40	8 21 25	22 38 81		
7	281 36.2		31.7	238 44.8	116	+11	11.8	40	43	10	42	29 29	27 77		
8	296 36.2		30.8	253 15.4	116		27.3	35	48	14	43	36 33	18 73		
9	311 36.3		29.9	267 45.8	114		42.6	30	17 53	17	45	42 36	22 10 69		
10	326 36.4		29.0	282 16.2	114	+11	58.0	20	18 02	24	50	8 52 42	21 56 64		
11	341 36.5	-10	28.1	296 46.6	114	+12	13.2	10 N	18 10	18 31	18 56	9 01 47	21 45 58		
12	356 36.5	-10	27.2	311 16.9	113	+12	28.4	0	18 17	18 38	19 02	9 10 52	21 33 54		
13	11 36.6		26.3	325 47.0	111		43.6	10 S	24	46	11	19 56	22 50		
14	26 36.7		25.4	340 17.2	112	+12	58.7	20	32	18 55	21	28 62	21 11 44		
15	41 36.8		24.4	354 47.2	110	+13	13.7	30	42	19 06	35	39 68	20 57 39		
16	56 36.8		23.5	9 17.2	110		28.7	35	47	13	44	45 71	50 35		
17	71 36.9	-10	22.6	23 47.1	109	+13	43.6	40	18 53	19 21	19 55	9 52 76	20 41 32		
18	86 37.0	-10	21.7	38 16.9	108	+13	58.4	45	19 00	19 31	20 09	10 01 80	20 31 27		
19	101 37.1		20.8	52 46.6	107	+14	13.2	50	09	44	26	11 86	19 21		
20	116 37.1		19.9	67 16.3	107		27.9	52	13	49	34	16 89	13 18		
21	131 37.2		19.0	81 45.9	106		42.5	54	18	19 56	44	21 93	07 15		
22	146 37.3		18.1	96 15.3	104	+14	57.0	56	23	20 03	20 55	27 97	20 00 11		
23	161 37.4		17.2	110 44.8	105	+15	11.5	58	28	11	21 08	34 101	19 52 7		
24	176 37.4	-10	16.3	125 14.1	103	+15	25.9	60 S	19 34	20 21	21 24	10 41 107	19 43 2		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 13 ^h 54.0 ^m		Mag: -3.9 PMG: 12 ^h 57 ^m			Mag: +1.1 PMG: 11 ^h 37 ^m			Mag: -2.5 PMG: 21 ^h 01 ^m			Mag: +1.0 PMG: 14 ^h 01 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	° /		° /	° /		° /	° /		° /	° /		° /	° /		
0	150 55.8		165 49.7	-7 55.6		185 46.1	-15 03.7		43 56.3	+22 51.4		149 21.5	-1 39.0		
1	165 58.3		180 49.2	54.3		200 46.6	03.1		58 58.9	51.4		164 23.7	38.9		
2	181 00.8		195 48.8	53.1		215 47.2	02.4		74 01.5	51.4		179 25.9	38.7		
3	196 03.2		210 48.3	51.9		230 47.7	01.8		89 04.1	51.5		194 28.1	38.6		
4	211 05.7		225 47.9	50.7		245 48.2	01.1		104 06.8	51.5		209 30.3	38.5		
5	226 08.2		240 47.5	-7 49.5		260 48.8	-15 00.5		119 09.4	+22 51.5		224 32.5	-1 38.4		
6	241 10.6		255 47.0	-7 48.3		275 49.3	-14 59.9		134 12.0	+22 51.5		239 34.7	-1 38.3		
7	256 13.1		270 46.6	47.0		290 49.8	59.2		149 14.6	51.5		254 36.9	38.2		
8	271 15.5		285 46.1	45.8		305 50.4	58.6		164 17.2	51.6		269 39.1	38.0		
9	286 18.0		300 45.7	44.6		320 50.9	57.9		179 19.9	51.6		284 41.3	37.9		
10	301 20.5		315 45.3	43.4		335 51.5	57.3		194 22.5	51.6		299 43.5	37.8		
11	316 22.9		330 44.8	-7 42.2		350 52.0	-14 56.6		209 25.1	+22 51.6		314 45.7	-1 37.7		
12	331 25.4		345 44.4	-7 40.9		5 52.5	-14 56.0		224 27.7	+22 51.6		329 47.9	-1 37.6		
13	346 27.9		0 44.0	39.7		20 53.1	55.4		239 30.3	51.7		344 50.1	37.5		
14	1 30.3		15 43.5	38.5		35 53.6	54.7		254 33.0	51.7		359 52.3	37.3		
15	16 32.8		30 43.1	37.3		50 54.1	54.1		269 35.6	51.7		14 54.5	37.2		
16	31 35.3		45 42.7	36.1		65 54.7	53.4		284 38.2	51.7		29 56.7	37.1		
17	46 37.7		60 42.2	-7 34.8		80 55.2	-14 52.8		299 40.8	+22 51.7		44 58.9	-1 37.0		
18	61 40.2		75 41.8	-7 33.6		95 55.8	-14 52.1		314 43.4	+22 51.8		60 01.1	-1 36.9		
19	76 42.7		90 41.4	32.4		110 56.3	51.5		329 46.0	51.8		75 03.3	36.7		
20	91 45.1		105 40.9	31.2		125 56.8	50.8		344 48.6	51.8		90 05.5	36.6		
21	106 47.6		120 40.5	29.9		140 57.4	50.2		359 51.3	51.8		105 07.7	36.5		
22	121 50.0		135 40.0	28.7		155 57.9	49.6		14 53.9	51.8		120 09.9	36.4		
23	136 52.5		150 39.6	27.5		170 58.5	48.9		29 56.5	51.9		135 12.1	36.3		
24	151 55.0		165 39.2	-7 26.3		185 59.0	-14 48.3		44 59.1	+22 51.9		150 14.3	-1 36.2		
Dif	—		-4	+12		+5	+6		+26	0		+22	+		

ALMANAQUE NÁUTICO PERSEUS

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16/2 PMG:12 ^h 13.3 ^m			Edad: 5.5 ^d SD: 16/1 PMG: 17 ^h 09 ^m							Civil		Náutico	Hora	R°	Hora	R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif												
h	°	/	°	/	°	/	°	/	°	h	m	h	m	h	m	m	h	m	m
0	176	39.4	-9	54.3	112	30.7	+20	44.0	60 N	17	12	17	54	18	43		7	49	8
1	191	39.5		53.4	126	57.7	+20	55.9	58	17		57		42		8	06	16	
2	206	39.5		52.5	141	24.6	+21	07.7	56	21		17	59	42		20	23		
3	221	39.6		51.6	155	51.4		19.4	54	25		18	01	42		32	27		
4	236	39.7		50.7	170	18.1		31.0	52	29			03	42		43	31		
5	251	39.8	-9	49.8	184	44.7	+21	42.4	50	17	32	18	05	18	42	8	53	34	
6	266	39.9	-9	48.8	199	11.2	+21	53.7	45	17	39	18	09	18	43	9	14	39	
7	281	40.0		47.9	213	37.6	+22	04.9	40	45		12		44		31	43		
8	296	40.1		47.0	228	03.9		16.0	35	50		16		45		45	46		
9	311	40.1		46.1	242	30.1		26.9	30	17	55	19		47		9	57	49	
10	326	40.2		45.2	256	56.2		37.7	20	18	03	25		51		10	19	53	
11	341	40.3	-9	44.2	271	22.2	+22	48.3	10 N	18	10	18	31	18	56	10	37	57	
12	356	40.4	-9	43.3	285	48.1	+22	58.8	0	18	17	18	38	19	02	10	55	60	
13	11	40.5		42.4	300	13.9	+23	09.2	10 S	24		45		10		11	13	63	
14	26	40.6		41.5	314	39.6		19.4	20	31		18	53	20		32	67		
15	41	40.7		40.6	329	05.2		29.5	30	40		19	04	33		11	54	71	
16	56	40.8		39.6	343	30.7		39.4	35	45		11		42		12	07	74	
17	71	40.8	-9	38.7	357	56.1	+23	49.2	40	18	50	19	18	19	52	12	22	77	
18	86	40.9	-9	37.8	12	21.4	+23	58.9	45	18	57	19	28	20	05	12	40	81	
19	101	41.0		36.9	26	46.7	+24	08.4	50	19	05	39		21		13	03	86	
20	116	41.1		36.0	41	11.8		17.8	52	09		45		29		14	89		
21	131	41.2		35.0	55	36.8		27.0	54	13		51		38		26	93		
22	146	41.3		34.1	70	01.7		36.0	56	18		19	58	20	49	41	97		
23	161	41.4		33.2	84	26.6		44.9	58	23		20	06	21	01	13	57	105	
24	176	41.5	-9	32.3	98	51.3	+24	53.6	60 S	19	29	20	15	21	16	14	18	115	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 13 ^h 46.1 ^m		Mag: -3.9 PMG: 12 ^h 58 ^m		Mag: +1.1 PMG: 11 ^h 35 ^m		Mag: -2.5 PMG: 20 ^h 52 ^m		Mag: +1.0 PMG: 13 ^h 53 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	/	°	/	°	/	°	/	°	/
0	152	54.1	165	28.9	-6	56.8	186	12.0	-14	32.7
1	167	56.6	180	28.5		55.6	201	12.6		32.0
2	182	59.0	195	28.0		54.3	216	13.1		31.4
3	198	01.5	210	27.6		53.1	231	13.7		30.7
4	213	04.0	225	27.2		51.9	246	14.2		30.1
5	228	06.4	240	26.8	-6	50.6	261	14.7	-14	29.4
6	243	08.9	255	26.3	-6	49.4	276	15.3	-14	28.8
7	258	11.4	270	25.9		48.1	291	15.8		28.1
8	273	13.8	285	25.5		46.9	306	16.4		27.4
9	288	16.3	300	25.1		45.7	321	16.9		26.8
10	303	18.8	315	24.6		44.4	336	17.5		26.1
11	318	21.2	330	24.2	-6	43.2	351	18.0	-14	25.5
12	333	23.7	345	23.8	-6	42.0	6	18.6	-14	24.8
13	348	26.1	0	23.4		40.7	21	19.1		24.2
14	3	28.6	15	23.0		39.5	36	19.7		23.5
15	18	31.1	30	22.5		38.3	51	20.2		22.9
16	33	33.5	45	22.1		37.0	66	20.8		22.2
17	48	36.0	60	21.7	-6	35.8	81	21.3	-14	21.5
18	63	38.5	75	21.3	-6	34.5	96	21.9	-14	20.9
19	78	40.9	90	20.9		33.3	111	22.4		20.2
20	93	43.4	105	20.4		32.1	126	23.0		19.6
21	108	45.9	120	20.0		30.8	141	23.5		18.9
22	123	48.3	135	19.6		29.6	156	24.1		18.3
23	138	50.8	150	19.2		28.4	171	24.6		17.6
24	153	53.3	165	18.8	-6	27.1	186	25.1	-14	16.9
Dif	—		-4		+12		+5		+7	
									+26	
									0	
									+22	
										+1

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'2 PMG:12 ^h 13.2 ^m			Edad: 6.5 ^d SD: 16'1 PMG: 18 ^h 08 ^m PHE 4^h: 59'2 12^h: 59'2 20^h: 59'2 R°: 63^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	176	41.5	-9	32.3	98	51.3	57	+24	53.6	86	60 N	5 43	6 31	7 13	7 56	21	3 10 107	
1	191	41.6		31.4	113	16.0	56	+25	02.2	84	58	43	28	08	8 21	31	2 46 96	
2	206	41.7		30.4	127	40.6	54		10.6	83	56	43	26	04	41	37	26 90	
3	221	41.7		29.5	142	05.0	54		18.9	81	54	43	24	7 00	8 58	41	2 10 86	
4	236	41.8		28.6	156	29.4	54		27.0	81	52	43	23	6 57	9 12	44	1 56 83	
5	251	41.9	-9	27.7	170	53.7	53	+25	34.9	79	50	5 43	6 21	6 54	9 25	46	1 43 81	
6	266	42.0	-9	26.7	185	18.0	53	+25	42.7	78	45	5 43	6 17	6 47	9 51	50	1 18 77	
7	281	42.1		25.8	199	42.1	51		50.3	76	40	42	13	41	10 12	52	0 58 74	
8	296	42.2		24.9	214	06.1	50	+25	57.8	75	35	41	10	36	30	54	42 71	
9	311	42.3		24.0	228	30.1	50	+26	05.0	72	30	39	07	31	10 45	55	27 69	
10	326	42.4		23.0	242	54.0	49		12.1	71	20	36	6 01	23	11 10	59	0 03 66	
11	341	42.5	-9	22.1	257	17.8	48	+26	19.1	70	10 N	5 31	5 55	6 16	11 33	60	*** ** *	
12	356	42.6	-9	21.2	271	41.5	47	+26	25.8	67	0	5 25	5 49	6 10	11 54	62	*** ** *	
13	11	42.7		20.3	286	05.2	47		32.4	66	10 S	17	42	6 03	12 15	63	*** ** *	
14	26	42.8		19.3	300	28.7	45		38.8	64	20	5 07	33	5 56	12 37	66	23 37 61	
15	41	42.9		18.4	314	52.2	45		45.0	62	30	4 54	23	47	13 04	67	23 10 59	
16	56	43.0		17.5	329	15.7	45		51.1	61	35	45	16	42	19 69	22	54 58	
17	71	43.0	-9	16.6	343	39.0	43	+26	56.9	58	40	4 35	5 09	5 37	13 38	70	22 35 57	
18	86	43.1	-9	15.6	358	02.3	43	+27	02.6	57	45	4 22	4 59	5 30	14 00	72	22 12 56	
19	101	43.2		14.7	12	25.5	42		08.1	55	50	4 06	48	22	28 75	21	43 54	
20	116	43.3		13.8	26	48.7	42		13.5	54	52	3 58	43	18	42 77	29	53	
21	131	43.4		12.8	41	11.8	41		18.6	51	54	49	36	14	14 58	79	21 13 50	
22	146	43.5		11.9	55	34.8	40		23.6	50	56	39	30	10	15 17	82	20 53 48	
23	161	43.6		11.0	69	57.8	40		28.4	48	58	26	22	5 05	15 40	87	20 29 44	
24	176	43.7	-9	10.1	84	20.7	39	+27	33.0	46	60 S	3 12	4 13	4 59	16 12	96	19 58 34	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 13 ^h 42.2 ^m		Mag: -3.9 PMG: 12 ^h 59 ^m			Mag: +1.0 PMG: 11 ^h 34 ^m			Mag: -2.5 PMG: 20 ^h 48 ^m			Mag: +1.0 PMG: 13 ^h 50 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	153	53.3	165	18.8	-6	27.1	186	25.1	-14	16.9	47	04.1	+22	52.7	151	59.8	-1	30.5
1	168	55.7	180	18.3		25.9	201	25.7		16.3	62	06.7		52.8	167	02.0		30.4
2	183	58.2	195	17.9		24.6	216	26.2		15.6	77	09.3		52.8	182	04.2		30.3
3	199	00.6	210	17.5		23.4	231	26.8		15.0	92	11.9		52.8	197	06.4		30.1
4	214	03.1	225	17.1		22.2	246	27.3		14.3	107	14.5		52.8	212	08.6		30.0
5	229	05.6	240	16.7	-6	20.9	261	27.9	-14	13.6	122	17.1	+22	52.8	227	10.8	-1	29.9
6	244	08.0	255	16.3	-6	19.7	276	28.4	-14	13.0	137	19.7	+22	52.8	242	13.0	-1	29.8
7	259	10.5	270	15.8		18.4	291	29.0		12.3	152	22.3		52.9	257	15.2		29.7
8	274	13.0	285	15.4		17.2	306	29.5		11.7	167	24.9		52.9	272	17.4		29.6
9	289	15.4	300	15.0		15.9	321	30.1		11.0	182	27.5		52.9	287	19.6		29.4
10	304	17.9	315	14.6		14.7	336	30.6		10.3	197	30.1		52.9	302	21.8		29.3
11	319	20.4	330	14.2	-6	13.5	351	31.2	-14	09.7	212	32.7	+22	52.9	317	24.0	-1	29.2
12	334	22.8	345	13.8	-6	12.2	6	31.7	-14	09.0	227	35.3	+22	52.9	332	26.2	-1	29.1
13	349	25.3	0	13.4		11.0	21	32.3		08.4	242	37.9		53.0	347	28.4		29.0
14	4	27.8	15	12.9		09.7	36	32.9		07.7	257	40.4		53.0	2	30.6		28.8
15	19	30.2	30	12.5		08.5	51	33.4		07.0	272	43.0		53.0	17	32.8		28.7
16	34	32.7	45	12.1		07.2	66	34.0		06.4	287	45.6		53.0	32	35.0		28.6
17	49	35.1	60	11.7	-6	06.0	81	34.5	-14	05.7	302	48.2	+22	53.0	47	37.2	-1	28.5
18	64	37.6	75	11.3	-6	04.8	96	35.1	-14	05.0	317	50.8	+22	53.0	62	39.4	-1	28.4
19	79	40.1	90	10.9		03.5	111	35.6		04.4	332	53.4		53.1	77	41.6		28.2
20	94	42.5	105	10.5		02.3	126	36.2		03.7	347	56.0		53.1	92	43.8		28.1
21	109	45.0	120	10.0	-6	01.0	141	36.7		03.1	2	58.6		53.1	107	46.0		28.0
22	124	47.5	135	09.6	-5	59.8	156	37.3		02.4	18	01.2		53.1	122	48.2		27.9
23	139	49.9	150	09.2		58.5	171	37.8		01.7	33	03.8		53.1	137	50.4		27.8
24	154	52.4	165	08.8	-5	57.3	186	38.4	-14	01.1	48	06.3	+22	53.1	152	52.6	-1	27.7
Dif	—		-4		+12		+6		+7		+26		0		+22		+	

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG:12 ^h 13.0 ^m			Edad: 7.5 ^d SD: 16/1 PMG: 19 ^h 11 ^m PHE 4^h: 59/2 12^h: 59/2 20^h: 59/2 R°: 64^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°	
h	° /	° /	° /	° /		° /		°		h m	h m	h m	h m	h m	m	h m	m	
0	176	43.7	-9	10.1		84	20.7	+27	33.0	44	60 N	17 17	17 59	18 48	8 17	60	4 57	75
1	191	43.8		09.1		98	43.6		39	37.4	42	21	18 01	47	8 52	62	4 22	73
2	206	43.9		08.2		113	06.4		38	41.6	40	25	03	46	9 18	63	3 56	72
3	221	44.0		07.3		127	29.2		38	45.6	40	29	05	46	39	63	36	70
4	236	44.1		06.3		141	51.9		37	49.4	38	32	06	46	9 56	64	19	70
5	251	44.2	-9	05.4		156	14.6	+27	53.1	37	50	17 35	18 08	18 45	10 11	64	3 04	70
6	266	44.3	-9	04.5		170	37.2	+27	56.6	35	45	17 42	18 11	18 45	10 41	64	2 35	68
7	281	44.4		03.6		184	59.8	+27	59.8	32	40	47	15	46	11 04	65	2 12	67
8	296	44.5		02.6		199	22.3	+28	02.9	31	35	52	17	47	24	64	1 53	67
9	311	44.6		01.7		213	44.8		05.8	29	30	17 56	20	48	11 40	65	36	67
10	326	44.7	-9	00.8		228	07.3		08.5	27	20	18 04	26	51	12 09	64	1 09	65
11	341	44.8	-8	59.8		242	29.8	+28	11.0	25	10 N	18 10	18 31	18 56	12 33	64	0 45	65
12	356	44.9	-8	58.9		256	52.2	+28	13.3	23	0	18 16	18 37	19 02	12 56	64	0 23	64
13	11	45.0		58.0		271	14.6		15.4	21	10 S	23	44	09	13 18	64	0 01	63
14	26	45.1		57.0		285	36.9		17.3	19	20	30	18 52	18	13 43	64	** ** *	
15	41	45.2		56.1		299	59.3		19.0	17	30	38	19 02	31	14 11	64	** ** *	
16	56	45.3		55.2		314	21.6		20.5	15	35	42	08	39	28	63	23 52	69
17	71	45.4	-8	54.2		328	43.9	+28	21.9	14	40	18 48	19 15	19 49	14 48	63	23 32	70
18	86	45.5	-8	53.3		343	06.2	+28	23.0	11	45	18 54	19 24	20 01	15 12	62	23 08	71
19	101	45.6		52.4		357	28.5		23.9	9	50	19 01	35	16	43	61	22 37	72
20	116	45.7		51.4		11	50.8		24.7	8	52	05	40	24	15 59	60	22	73
21	131	45.8		50.5		26	13.0		25.2	5	54	08	46	33	16 17	59	22 03	75
22	146	45.9		49.6		40	35.3		25.5	3	56	13	19 52	42	16 39	58	21 41	76
23	161	46.0		48.6		54	57.6		25.7	2	58	17	20 00	20 54	17 07	56	21 13	79
24	176	46.1	-8	47.7		69	19.8	+28	25.6	1	60 S	19 23	20 08	21 08	17 48	50	20 32	84

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 13 ^h 38.3 ^m		Mag: -3.9 PMG: 13 ^h 00 ^m		Mag: +1.0 PMG: 11 ^h 33 ^m		Mag: -2.5 PMG: 20 ^h 44 ^m		Mag: +1.0 PMG: 13 ^h 46 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /								
0	154	52.4	165	08.8	-5	57.3	186	38.4	-14	01.1	48	06.3	+22	53.1	152	52.6	-1	27.7
1	169	54.9	180	08.4		56.0	201	38.9	-14	00.4	63	08.9		53.2	167	54.8		27.5
2	184	57.3	195	08.0		54.8	216	39.5	-13	59.7	78	11.5		53.2	182	57.0		27.4
3	199	59.8	210	07.6		53.5	231	40.0		59.1	93	14.1		53.2	197	59.2		27.3
4	215	02.2	225	07.2		52.3	246	40.6		58.4	108	16.7		53.2	213	01.4		27.2
5	230	04.7	240	06.8	-5	51.0	261	41.1	-13	57.7	123	19.3	+22	53.2	228	03.6	-1	27.1
6	245	07.2	255	06.3	-5	49.8	276	41.7	-13	57.1	138	21.9	+22	53.2	243	05.8	-1	26.9
7	260	09.6	270	05.9		48.5	291	42.3		56.4	153	24.4		53.3	258	08.0		26.8
8	275	12.1	285	05.5		47.3	306	42.8		55.7	168	27.0		53.3	273	10.1		26.7
9	290	14.6	300	05.1		46.0	321	43.4		55.1	183	29.6		53.3	288	12.3		26.6
10	305	17.0	315	04.7		44.8	336	43.9		54.4	198	32.2		53.3	303	14.5		26.5
11	320	19.5	330	04.3	-5	43.5	351	44.5	-13	53.7	213	34.8	+22	53.3	318	16.7	-1	26.3
12	335	22.0	345	03.9	-5	42.3	6	45.0	-13	53.1	228	37.4	+22	53.3	333	18.9	-1	26.2
13	350	24.4	0	03.5		41.0	21	45.6		52.4	243	39.9		53.3	348	21.1		26.1
14	5	26.9	15	03.1		39.8	36	46.1		51.7	258	42.5		53.4	3	23.3		26.0
15	20	29.4	30	02.7		38.5	51	46.7		51.1	273	45.1		53.4	18	25.5		25.9
16	35	31.8	45	02.3		37.3	66	47.3		50.4	288	47.7		53.4	33	27.7		25.7
17	50	34.3	60	01.9	-5	36.0	81	47.8	-13	49.7	303	50.3	+22	53.4	48	29.9	-1	25.6
18	65	36.7	75	01.4	-5	34.8	96	48.4	-13	49.1	318	52.9	+22	53.4	63	32.1	-1	25.5
19	80	39.2	90	01.0		33.5	111	48.9		48.4	333	55.4		53.4	78	34.3		25.4
20	95	41.7	105	00.6		32.3	126	49.5		47.7	348	58.0		53.5	93	36.5		25.3
21	110	44.1	120	00.2		31.0	141	50.0		47.1	4	00.6		53.5	108	38.7		25.2
22	125	46.6	134	59.8		29.8	156	50.6		46.4	19	03.2		53.5	123	40.9		25.0
23	140	49.1	149	59.4		28.5	171	51.1		45.7	34	05.8		53.5	138	43.1		24.9
24	155	51.5	164	59.0	-5	27.3	186	51.7	-13	45.0	49	08.3	+22	53.5	153	45.3	-1	24.8
Dif	—		-4		+12		+6		+7		+26		0		+22		+	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG:12 ^h 12.8 ^m			Edad: 8.5 ^d PHE { 4 ^h : 59'2 12 ^h : 59'1 20 ^h : 59'1 Rº: 61 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m		
0	176	46.1	-8	47.7	69	19.8	33	+28	25.6	2	5	37	6	25	7	07	9	15		
1	191	46.2		46.8	83	42.1	33		25.4	5	38		23	7	03	9	53	90		
2	206	46.3		45.8	98	04.4	33		24.9	6	39		22	6	59	10	20	84		
3	221	46.4		44.9	112	26.7	33		24.3	8	39		20	56		41	81			
4	236	46.5		44.0	126	49.0	33		23.5	11	39		18	52	10	58	79			
5	251	46.6	-8	43.0	141	11.3	33	+28	22.4	12	5	40	6	17	6	50	11	13		
6	266	46.7	-8	42.1	155	33.6	33	+28	21.2	14	5	40	6	14	6	43	11	44		
7	281	46.8		41.2	169	56.0	34		19.8	16	39		11	38	12	07	72			
8	296	46.9		40.2	184	18.3	33		18.2	18	38		08	33		27	69			
9	311	47.1		39.3	198	40.7	34		16.4	21	37		05	29	12	44	67			
10	326	47.2		38.4	213	03.2	35		14.3	23	34	6	00	22	13	12	65			
11	341	47.3	-8	37.4	227	25.6	34	+28	12.1	24	5	30	5	54	6	16	13	36		
12	356	47.4	-8	36.5	241	48.1	35	+28	09.7	25	5	24	5	49	6	10	13	58		
13	11	47.5		35.6	256	10.7	36		07.2	28	17		42	6	03	14	21	59		
14	26	47.6		34.6	270	33.2	35		04.4	30	5	08	34	5	57	14	45	57		
15	41	47.7		33.7	284	55.8	36	+28	01.4	32	4	55	24	49	15	13	54			
16	56	47.8		32.7	299	18.5	37	+27	58.2	33	47		18	44		30	52	***		
17	71	47.9	-8	31.8	313	41.2	37	+27	54.9	36	4	38	5	11	5	39	15	49	***	
18	86	48.0	-8	30.9	328	03.9	37	+27	51.3	37	4	26	5	02	5	33	16	13	***	
19	101	48.1		29.9	342	26.7	38		47.6	39	10		52	25		43	42		23	
20	116	48.2		29.0	356	49.6	39		43.7	41	4	03	46	22	16	57	41		33	
21	131	48.3		28.1	11	12.5	39		39.6	43	3	54	41	18	17	15	37		23	
22	146	48.4		27.1	25	35.4	39		35.3	45	44		34	14	17	35	33		22	
23	161	48.6		26.2	39	58.4	40		30.8	47	33		27	09	18	01	27		22	
24	176	48.7	-8	25.2	54	21.5	41	+27	26.1	47	3	19	4	19	5	04	18	37	15	21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 34.3 ^m		Mag: -3.9 PMG: 13 ^h 00 ^m		Mag: +1.0 PMG: 11 ^h 32 ^m		Mag: -2.5 PMG: 20 ^h 40 ^m		Mag: +1.0 PMG: 13 ^h 43 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	155	51.5	164	59.0	-5	27.3	186	51.7	-13	45.0
1	170	54.0	179	58.6		26.0	201	52.3		44.4
2	185	56.5	194	58.2		24.8	216	52.8		43.7
3	200	58.9	209	57.8		23.5	231	53.4		43.0
4	216	01.4	224	57.4		22.3	246	53.9		42.4
5	231	03.9	239	57.0	-5	21.0	261	54.5	-13	41.7
6	246	06.3	254	56.6	-5	19.8	276	55.1	-13	41.0
7	261	08.8	269	56.2		18.5	291	55.6		40.3
8	276	11.2	284	55.8		17.3	306	56.2		39.7
9	291	13.7	299	55.4		16.0	321	56.7		39.0
10	306	16.2	314	55.0		14.7	336	57.3		38.3
11	321	18.6	329	54.6	-5	13.5	351	57.8	-13	37.7
12	336	21.1	344	54.2	-5	12.2	6	58.4	-13	37.0
13	351	23.6	359	53.8		11.0	21	59.0		36.3
14	6	26.0	14	53.4		09.7	36	59.5		35.6
15	21	28.5	29	53.0		08.5	52	00.1		35.0
16	36	31.0	44	52.6		07.2	67	00.6		34.3
17	51	33.4	59	52.2	-5	05.9	82	01.2	-13	33.6
18	66	35.9	74	51.8	-5	04.7	97	01.8	-13	32.9
19	81	38.4	89	51.4		03.4	112	02.3		32.3
20	96	40.8	104	51.0		02.2	127	02.9		31.6
21	111	43.3	119	50.6	-5	00.9	142	03.5		30.9
22	126	45.7	134	50.2	-4	59.7	157	04.0		30.2
23	141	48.2	149	49.8		58.4	172	04.6		29.6
24	156	50.7	164	49.4	-4	57.1	187	05.1	-13	28.9
Dif	—		-4		+13		+6		+7	
								+26		0
									+22	+1

UT	SOL		LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG:12 ^h 12.7 ^m		Edad: 9.5 ^d SD: 16/1 PMG: 21 ^h 14 ^m						Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	h m	h m	h m	h m
0	176 48.7	-8 25.2	54 21.5		+27 26.1		60 N	17 22	18 04	18 52	10 55	113	6 41	11	
1	191 48.8		24.3	68 44.7	42	21.3	48	58	26	06	51	11 23	103	6 13	20
2	206 48.9		23.4	83 07.9	42	16.3	50	56	30	07	50	11 44	98	5 50	27
3	221 49.0		22.4	97 31.1	42	11.1	52	54	33	09	50	12 02	93	32	3
4	236 49.1		21.5	111 54.5	44	05.7	54	52	36	10	49	17 89		17	34
5	251 49.2	-8 20.5	126 17.9	44	+27 00.1		56	50	17 39	18 11	18 49	12 31	86	5 03	37
6	266 49.3	-8 19.6	140 41.4	45	+26 54.3	58	45	45	17 45	18 14	18 48	12 57	81	4 35	43
7	281 49.4		18.7	155 05.0	46	48.4	59	40	49	17	48	13 19	76	4 14	46
8	296 49.5		17.7	169 28.6	46	42.3	61	35	54	19	49	36 73		3 55	49
9	311 49.6		16.8	183 52.3	47	36.0	63	30	17 58	22	49	13 51	71	40	51
10	326 49.8		15.8	198 16.1	48	29.6	64	20	18 04	26	52	14 17	66	3 13	55
11	341 49.9	-8 14.9	212 40.0	49	+26 23.0	66	10 N	18 10	18 31	18 56	14 39	62		2 50	58
12	356 50.0	-8 14.0	227 04.0	50	+26 16.2	68	0	18 16	18 37	19 01	15 00	58		2 28	61
13	11 50.1		13.0	241 28.0	50	09.2	70	10 S	22	43	08	20 55		2 06	64
14	26 50.2		12.1	255 52.1	51	+26 02.1	71	20	28	18 50	17	15 42	51	1 43	67
15	41 50.3		11.1	270 16.4	53	+25 54.8	73	30	35	19 00	28	16 07	47	1 15	71
16	56 50.4		10.2	284 40.7	53	47.3	75	35	40	06	36	22 44		0 59	73
17	71 50.5	-8 09.2	299 05.1	54	+25 39.7	76	40	40	18 45	19 12	19 45	16 39	41	0 40	75
18	86 50.7	-8 08.3	313 29.6	55	+25 31.9	78	45	45	18 50	19 21	19 57	17 00	36	0 17	79
19	101 50.8		07.4	327 54.2	56	24.0	79	50	18 57	31	20 12	25 31		** ** *	
20	116 50.9		06.4	342 18.8	56	15.9	81	52	19 00	36	19	38 28		** ** *	
21	131 51.0		05.5	356 43.6	58	+25 07.6	83	54	04	41	27	17 52	24	** ** *	
22	146 51.1		04.5	11 08.5	59	+24 59.2	84	56	08	47	36	18 08	20	** ** *	
23	161 51.2		03.6	25 33.5	60	50.6	86	58	12	19 54	20 47	28 14		** ** *	
24	176 51.3	-8 02.6	39 58.5	60	+24 41.9	87	60 S	19 17	20 02	21 00	18 52	6		23 46	113

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 13 ^h 30.4 ^m		Mag: -3.9 PMG: 13 ^h 01 ^m		Mag: +1.0 PMG: 11 ^h 31 ^m		Mag: -2.5 PMG: 20 ^h 36 ^m		Mag: +1.0 PMG: 13 ^h 39 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	156 50.7	164 49.4	-4 57.1		187 05.1	-13 28.9	50 10.1	+22 53.9	154 37.9	-1 21.9
1	171 53.1	179 49.0		55.9	202 05.7	28.2	65 12.7	53.9	169 40.1	21.8
2	186 55.6	194 48.6		54.6	217 06.3	27.5	80 15.3	53.9	184 42.3	21.7
3	201 58.1	209 48.2		53.4	232 06.8	26.9	95 17.8	53.9	199 44.5	21.6
4	217 00.5	224 47.8		52.1	247 07.4	26.2	110 20.4	53.9	214 46.7	21.4
5	232 03.0	239 47.4	-4 50.9		262 07.9	-13 25.5	125 23.0	+22 53.9	229 48.9	-1 21.3
6	247 05.5	254 47.0	-4 49.6		277 08.5	-13 24.8	140 25.5	+22 53.9	244 51.1	-1 21.2
7	262 07.9	269 46.6		48.3	292 09.1	24.2	155 28.1	54.0	259 53.3	21.1
8	277 10.4	284 46.2		47.1	307 09.6	23.5	170 30.7	54.0	274 55.5	21.0
9	292 12.9	299 45.8		45.8	322 10.2	22.8	185 33.3	54.0	289 57.7	20.8
10	307 15.3	314 45.4		44.5	337 10.8	22.1	200 35.8	54.0	304 59.9	20.7
11	322 17.8	329 45.0	-4 43.3		352 11.3	-13 21.4	215 38.4	+22 54.0	320 02.1	-1 20.6
12	337 20.2	344 44.6	-4 42.0		7 11.9	-13 20.8	230 41.0	+22 54.0	335 04.3	-1 20.5
13	352 22.7	359 44.2		40.8	22 12.5	20.1	245 43.5	54.0	350 06.5	20.4
14	7 25.2	14 43.8		39.5	37 13.0	19.4	260 46.1	54.1	5 08.7	20.2
15	22 27.6	29 43.4		38.2	52 13.6	18.7	275 48.6	54.1	20 10.9	20.1
16	37 30.1	44 43.0		37.0	67 14.1	18.1	290 51.2	54.1	35 13.0	20.0
17	52 32.6	59 42.6	-4 35.7		82 14.7	-13 17.4	305 53.8	+22 54.1	50 15.2	-1 19.9
18	67 35.0	74 42.2	-4 34.5		97 15.3	-13 16.7	320 56.3	+22 54.1	65 17.4	-1 19.8
19	82 37.5	89 41.8		33.2	112 15.8	16.0	335 58.9	54.1	80 19.6	19.6
20	97 40.0	104 41.4		31.9	127 16.4	15.3	351 01.5	54.1	95 21.8	19.5
21	112 42.4	119 41.0		30.7	142 17.0	14.7	6 04.0	54.2	110 24.0	19.4
22	127 44.9	134 40.6		29.4	157 17.5	14.0	21 06.6	54.2	125 26.2	19.3
23	142 47.4	149 40.2		28.1	172 18.1	13.3	36 09.2	54.2	140 28.4	19.2
24	157 49.8	164 39.8	-4 26.9		187 18.7	-13 12.6	51 11.7	+22 54.2	155 30.6	-1 19.0
Dif	—		-4	+13	+6	+7	+26	0	+22	+

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1 PMG:12 ^h 12.5 ^m				Edad: 10.5 ^d SD: 16 ^h 0 PMG: 22 ^h 10 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	176	51.3	-8	02.6	39	58.5	+24	41.9	89	33.0	89	60 N	5	32	6	20	7	01	12 46 108	6 51 4
1	191	51.5		01.7	54	23.7			63	24.0	90	58	33	18	6	58	13	05 101	32 10	
2	206	51.6	-8	00.8	68	49.0			64	14.8	92	56	34	17	54	20	96	16	15	
3	221	51.7	-7	59.8	83	14.4			64	05.5	93	54	35	15	51	33	92	6	02 19	
4	236	51.8		58.9	97	39.8	+24	05.5	66	56.1	94	52	35	14	48	45	88	5	50 22	
5	251	51.9	-7	57.9	112	05.4	+23	56.1	66	46.4	97	50	5	36	6	13	6	45	13 55 85	5 39 25
6	266	52.0	-7	57.0	126	31.1	+23	46.4	67	36.7	97	45	5	36	6	10	6	40	14 16 79	5 16 32
7	281	52.2		56.0	140	56.9			68	26.8	99	40	36	08	35	34	74	4	58 36	
8	296	52.3		55.1	155	22.7			68	16.8	100	35	36	05	31	14	48 70	43	39	
9	311	52.4		54.1	169	48.7			70	06.6	102	30	35	6	03	27	15 00 68	29	42	
10	326	52.5		53.2	184	14.8	+23	06.6	71	56.3	103	20	33	5	58	21	22	61	4	06 47
11	341	52.6	-7	52.2	198	41.0	+22	56.3	72	45.9	104	10 N	5	29	5	54	6	15	15 40 57	3 46 52
12	356	52.7	-7	51.3	213	07.3	+22	45.9	73	35.3	106	0	5	24	5	48	6	09	15 57 53	3 27 56
13	11	52.9		50.4	227	33.8			75	24.6	107	10 S	18	42	6	03	16	14 49	3	09 59
14	26	53.0		49.4	242	00.3			75	13.8	108	20	5	09	35	5	57	32	44	2 48 64
15	41	53.1		48.5	256	26.9			76	02.9	109	30	4	57	26	50	16	53 38	24	69
16	56	53.2		47.5	270	53.6	+22	02.9	77	51.8	111	35	50	20	46	17	05 35	2	10 72	
17	71	53.3	-7	46.6	285	20.5	+21	51.8	79	40.6	112	40	4	40	5	13	5	41	17 19 31	1 54 75
18	86	53.4	-7	45.6	299	47.4	+21	40.6	79	29.3	113	45	4	29	5	05	5	36	17 35 27	1 34 80
19	101	53.6		44.7	314	14.5			81	17.8	115	50	14	4	55	29	17	55 21	1	10 86
20	116	53.7		43.7	328	41.7			82	06.3	115	52	4	07	50	26	18	04 19	0	58 89
21	131	53.8		42.8	343	08.9	+21	06.3	82	54.6	117	54	3	59	45	22	15	15	44	93
22	146	53.9		41.8	357	36.3	+20	54.6	84	42.9	117	56	50	39	19	27	11		28	98
23	161	54.0		40.9	12	03.8			85	31.0	119	58	39	32	14	41	7	0	09 104	
24	176	54.2	-7	39.9	26	31.4	+20	31.0	86			60 S	3	26	4	25	5	09	18 57 1	** ** *

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 26.5 ^m		Mag: -3.9 PMG: 13 ^h 02 ^m		Mag: +1.0 PMG: 11 ^h 30 ^m		Mag: -2.4 PMG: 20 ^h 32 ^m		Mag: +1.0 PMG: 13 ^h 36 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	157	49.8	164	39.8	-4	26.9	187	18.7	-13	12.6
1	172	52.3	179	39.5		25.6	202	19.2		11.9
2	187	54.7	194	39.1		24.4	217	19.8		11.2
3	202	57.2	209	38.7		23.1	232	20.4		10.6
4	217	59.7	224	38.3		21.8	247	20.9		09.9
5	233	02.1	239	37.9	-4	20.6	262	21.5	-13	09.2
6	248	04.6	254	37.5	-4	19.3	277	22.1	-13	08.5
7	263	07.1	269	37.1		18.0	292	22.6		07.8
8	278	09.5	284	36.7		16.8	307	23.2		07.2
9	293	12.0	299	36.3		15.5	322	23.8		06.5
10	308	14.5	314	35.9		14.2	337	24.3		05.8
11	323	16.9	329	35.5	-4	13.0	352	24.9	-13	05.1
12	338	19.4	344	35.1	-4	11.7	7	25.5	-13	04.4
13	353	21.8	359	34.7		10.4	22	26.0		03.7
14	8	24.3	14	34.4		09.2	37	26.6		03.1
15	23	26.8	29	34.0		07.9	52	27.2		02.4
16	38	29.2	44	33.6		06.6	67	27.7		01.7
17	53	31.7	59	33.2	-4	05.4	82	28.3	-13	01.0
18	68	34.2	74	32.8	-4	04.1	97	28.9	-13	00.3
19	83	36.6	89	32.4		02.8	112	29.5	-12	59.6
20	98	39.1	104	32.0		01.6	127	30.0		58.9
21	113	41.6	119	31.6	-4	00.3	142	30.6		58.3
22	128	44.0	134	31.2	-3	59.0	157	31.2		57.6
23	143	46.5	149	30.9		57.8	172	31.7		56.9
24	158	49.0	164	30.5	-3	56.5	187	32.3	-12	56.2
Dif	—		-4		+13		+6		+7	
							+26		0	
									+22	
									+1	

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna					
	SD: 16 ^h 1 PMG: 12 ^h 12.3 ^m			Edad: 11.5 ^d SD: 15 ^h 9 PMG: 23 ^h 02 ^m								PHE { 4 ^h : 58 ^m 5 12 ^h : 58 ^m 3 20 ^h : 58 ^m 2 Rº: 49 ^m											
	hG ☉	Dec		hG ☾	Dif		Dec	Dif				Civil	Náutico	Hora	Rº	Hora	Rº						
h	° /	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	h m	h m	h m	h m						
0	176 54.2	-7 39.9	26 31.4	87	+20 31.0	120	60 N	17 27	18 09	18 57	14 34	103	6 55	2									
1	191 54.3	39.0	40 59.1	88	+20 06.9	121	58	31	10	56	46	97	42	7									
2	206 54.4	38.0	55 26.9	89	+19 54.6	123	56	34	11	54	14	56	93	31	11								
3	221 54.5	37.1	69 54.8	90	+19 42.3	123	54	37	12	53	15	05	90	21	14								
4	236 54.6	36.1	84 22.8	92	+19 29.9	124	52	40	13	53	13	87	12	18									
5	251 54.8	-7 35.2	98 51.0	92	+19 17.4	125	50	17 42	18 14	18 52	15	20	84	6	04	21							
6	266 54.9	-7 34.2	113 19.2	93	+19 04.7	127	45	17 47	18 17	18 51	15	35	78	5	48	25							
7	281 55.0	33.3	127 47.5	95	+18 52.0	127	40	52	19	50	48	73	34	30									
8	296 55.1	32.3	142 16.0	95	+18 39.2	127	35	56	21	50	15	58	69	22	34								
9	311 55.3	31.4	156 44.5	96	+18 26.3	128	30	17 59	23	51	16	08	65	5	11	38							
10	326 55.4	30.4	171 13.1	98	+18 13.3	130	20	18 05	27	53	23	60	4	53	43								
11	341 55.5	-7 29.5	185 41.9	98	+18 00.2	131	10 N	18 10	18 32	18 56	16	37	55	4	38	47							
12	356 55.6	-7 28.5	200 10.7	100	+17 47.0	132	0	18 16	18 36	19 01	16	50	50	4	23	52							
13	11 55.7	27.6	214 39.7	101	+17 33.7	133	10 S	21	42	07	17	03	45	4	08	56							
14	26 55.9	26.6	229 08.8	101	+17 20.4	133	20	27	49	15	16	41	3	52	61								
15	41 56.0	25.7	243 37.9	101	+17 06.9	135	30	33	18 58	26	31	35	33	67									
16	56 56.1	24.7	258 07.2	103	+16 53.4	135	35	37	19 03	33	40	32	22	71									
17	71 56.2	-7 23.8	272 36.5	103	+16 39.8	136	40	18 42	19 09	19 42	17	50	28	3	09	75							
18	86 56.4	-7 22.8	287 06.0	105	+16 26.1	137	45	18 47	19 17	19 53	18	02	24	2	54	80							
19	101 56.5	21.9	301 35.5	107	+16 12.3	138	50	53	26	20 07	16	18	36	85									
20	116 56.6	20.9	316 05.2	107	+15 58.5	138	52	56	31	14	23	15	27	88									
21	131 56.7	20.0	330 34.9	107	+15 44.6	139	54	18 59	36	21	30	13	17	92									
22	146 56.9	19.0	345 04.7	108	+15 30.6	140	56	19 03	42	30	38	10	2	06	96								
23	161 57.0	18.1	359 34.7	110	+15 16.6	140	58	06	48	40	48	5	1	53	101								
24	176 57.1	-7 17.1	14 04.7	110			60 S	19 11	19 55	20 52	18	58	1	1	38	106							

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 13 ^h 22.5 ^m		Mag: -3.9 PMG: 13 ^h 02 ^m		Mag: +1.0 PMG: 11 ^h 29 ^m		Mag: -2.4 PMG: 20 ^h 28 ^m		Mag: +1.0 PMG: 13 ^h 32 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	158 49.0	164 30.5	-3 56.5	187 32.3	-12 56.2	52 13.1	+22 54.5	156 23.2	-1 16.2	
1	173 51.4	179 30.1	55.2	202 32.9	55.5	67 15.6	54.5	171 25.4	16.0	
2	188 53.9	194 29.7	54.0	217 33.4	54.8	82 18.2	54.5	186 27.6	15.9	
3	203 56.3	209 29.3	52.7	232 34.0	54.1	97 20.8	54.5	201 29.8	15.8	
4	218 58.8	224 28.9	51.4	247 34.6	53.4	112 23.3	54.5	216 32.0	15.7	
5	234 01.3	239 28.5	-3 50.1	262 35.2	-12 52.8	127 25.9	+22 54.6	231 34.2	-1 15.6	
6	249 03.7	254 28.1	-3 48.9	277 35.7	-12 52.1	142 28.4	+22 54.6	246 36.4	-1 15.4	
7	264 06.2	269 27.7	47.6	292 36.3	51.4	157 31.0	54.6	261 38.5	15.3	
8	279 08.7	284 27.4	46.3	307 36.9	50.7	172 33.5	54.6	276 40.7	15.2	
9	294 11.1	299 27.0	45.1	322 37.4	50.0	187 36.1	54.6	291 42.9	15.1	
10	309 13.6	314 26.6	43.8	337 38.0	49.3	202 38.6	54.6	306 45.1	15.0	
11	324 16.1	329 26.2	-3 42.5	352 38.6	-12 48.6	217 41.2	+22 54.6	321 47.3	-1 14.8	
12	339 18.5	344 25.8	-3 41.3	7 39.2	-12 47.9	232 43.7	+22 54.6	336 49.5	-1 14.7	
13	354 21.0	359 25.4	40.0	22 39.7	47.3	247 46.3	54.6	351 51.7	14.6	
14	9 23.5	14 25.0	38.7	37 40.3	46.6	262 48.8	54.7	6 53.9	14.5	
15	24 25.9	29 24.7	37.4	52 40.9	45.9	277 51.3	54.7	21 56.1	14.4	
16	39 28.4	44 24.3	36.2	67 41.4	45.2	292 53.9	54.7	36 58.3	14.2	
17	54 30.8	59 23.9	-3 34.9	82 42.0	-12 44.5	307 56.4	+22 54.7	52 00.5	-1 14.1	
18	69 33.3	74 23.5	-3 33.6	97 42.6	-12 43.8	322 59.0	+22 54.7	67 02.6	-1 14.0	
19	84 35.8	89 23.1	32.4	112 43.2	43.1	338 01.5	54.7	82 04.8	13.9	
20	99 38.2	104 22.7	31.1	127 43.7	42.4	353 04.1	54.7	97 07.0	13.8	
21	114 40.7	119 22.3	29.8	142 44.3	41.7	8 06.6	54.7	112 09.2	13.6	
22	129 43.2	134 22.0	28.5	157 44.9	41.0	23 09.2	54.8	127 11.4	13.5	
23	144 45.6	149 21.6	27.3	172 45.5	40.4	38 11.7	54.8	142 13.6	13.4	
24	159 48.1	164 21.2	-3 26.0	187 46.0	-12 39.7	53 14.3	+22 54.8	157 15.8	-1 13.3	
Dif	—	-4	+13	+6	+7	+25	0	+22	+	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG:12 ^h 12.1 ^m			Edad: 12.5 ^d PHE { 4 ^h : 58'0 12 ^h : 57'9 20 ^h : 57'7 PMG: 23 ^h 50 ^m R°: 45 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	57.1	-7	17.1	14	04.7	+15	16.6	60 N	5	26	6	14	6	56	16	15
1	191	57.2		16.2	28	34.8 ¹¹¹	+15	02.4 ¹⁴²	58	28		13	52	22	91	47	4
2	206	57.4		15.2	43	05.0 ¹¹²	+14	48.2 ¹⁴²	56	29		12	49	28	87	40	7
3	221	57.5		14.2	57	35.4 ¹¹⁴		34.0 ¹⁴²	54	30		11	46	33	84	34	10
4	236	57.6		13.3	72	05.7 ¹¹³		19.7 ¹⁴³	52	31		10	44	38	81	28	13
5	251	57.7	-7	12.3	86	36.2 ¹¹⁵	+14	05.3 ¹⁴⁴	50	5	32	6	09	6	41	16	42
6	266	57.9	-7	11.4	101	06.8 ¹¹⁶	+13	50.9 ¹⁴⁵	45	5	33	6	07	6	36	16	52
7	281	58.0		10.4	115	37.5 ¹¹⁷		36.4 ¹⁴⁴	40	34		05	32	16	59	6	03
8	296	58.1		09.5	130	08.2 ¹¹⁷		21.8 ¹⁴⁶	35	34		03	28	17	06	5	54
9	311	58.2		08.5	144	39.0 ¹¹⁸	+13	07.2 ¹⁴⁶	30	33	6	01	25	12	61	47	32
10	326	58.4		07.6	159	10.0 ¹²⁰	+12	52.5 ¹⁴⁷	20	31	5	57	19	22	55	35	37
11	341	58.5	-7	06.6	173	41.0 ¹²⁰	+12	37.8 ¹⁴⁷	10 N	5	28	5	53	6	14	17	30
12	356	58.6	-7	05.7	188	12.0 ¹²⁰	+12	23.0 ¹⁴⁸	0	5	24	5	48	6	09	17	39
13	11	58.8		04.7	202	43.2 ¹²²	+12	08.2 ¹⁴⁸	10 S	18		42	6	04	47	40	5
14	26	58.9		03.7	217	14.5 ¹²³	+11	53.4 ¹⁴⁸	20	5	10	36	5	58	17	55	4
15	41	59.0		02.8	231	45.8 ¹²³		38.5 ¹⁴⁹	30	4	59	27	52	18	05	39	62
16	56	59.1		01.8	246	17.2 ¹²⁴		23.5 ¹⁵⁰	35	52		22	48	10	27	31	66
17	71	59.3	-7	00.9	260	48.7 ¹²⁵	+11	08.5 ¹⁵⁰	40	4	43	5	16	5	43	18	17
18	86	59.4	-6	59.9	275	20.2 ¹²⁵	+10	53.5 ¹⁵⁰	45	4	32	5	08	5	38	18	24
19	101	59.5		59.0	289	51.9 ¹²⁷		38.4 ¹⁵¹	50	18	4	59	32	33	14	4	00
20	116	59.7		58.0	304	23.6 ¹²⁷		23.3 ¹⁵¹	52	11		54	29	37	11	3	54
21	131	59.8		57.1	318	55.3 ¹²⁷	+10	08.1 ¹⁵²	54	4	04	49	26	41	9	48	86
22	146	59.9		56.1	333	27.2 ¹²⁹	+9	52.9 ¹⁵²	56	3	55	44	23	46	6	40	90
23	162	00.1		55.1	347	59.1 ¹²⁹		37.7 ¹⁵²	58	45		38	19	52	2	32	94
24	177	00.2	-6	54.2	2	31.1 ¹³⁰	+9	22.4 ¹⁵³	60 S	3	33	4	30	5	15	18	58

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 13 ^h 18.6 ^m		Mag: -3.9 PMG: 13 ^h 03 ^m		Mag: +1.0 PMG: 11 ^h 28 ^m		Mag: -2.4 PMG: 20 ^h 24 ^m		Mag: +1.0 PMG: 13 ^h 29 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	159	48.1	164	21.2	-3	26.0	187	46.0	-12	39.7
1	174	50.6	179	20.8		24.7	202	46.6		39.0
2	189	53.0	194	20.4		23.5	217	47.2		38.3
3	204	55.5	209	20.0		22.2	232	47.8		37.6
4	219	57.9	224	19.7		20.9	247	48.3		36.9
5	235	00.4	239	19.3	-3	19.6	262	48.9	-12	36.2
6	250	02.9	254	18.9	-3	18.4	277	49.5	-12	35.5
7	265	05.3	269	18.5		17.1	292	50.1		34.8
8	280	07.8	284	18.1		15.8	307	50.6		34.1
9	295	10.3	299	17.7		14.5	322	51.2		33.4
10	310	12.7	314	17.4		13.3	337	51.8		32.7
11	325	15.2	329	17.0	-3	12.0	352	52.4	-12	32.0
12	340	17.7	344	16.6	-3	10.7	7	52.9	-12	31.3
13	355	20.1	359	16.2		09.4	22	53.5		30.6
14	10	22.6	14	15.8		08.2	37	54.1		30.0
15	25	25.1	29	15.5		06.9	52	54.7		29.3
16	40	27.5	44	15.1		05.6	67	55.2		28.6
17	55	30.0	59	14.7	-3	04.3	82	55.8	-12	27.9
18	70	32.4	74	14.3	-3	03.1	97	56.4	-12	27.2
19	85	34.9	89	13.9		01.8	112	57.0		26.5
20	100	37.4	104	13.5	-3	00.5	127	57.5		25.8
21	115	39.8	119	13.2	-2	59.2	142	58.1		25.1
22	130	42.3	134	12.8		58.0	157	58.7		24.4
23	145	44.8	149	12.4		56.7	172	59.3		23.7
24	160	47.2	164	12.0	-2	55.4	187	59.9	-12	23.0
Dif	—		-4	+13		+6	+7		+25	0
									+22	+

UT	SOL			☾ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG:12 ^h 11.9 ^m			Edad: 13.5 ^d PHE { 4 ^h : 57/5 12 ^h : 57/3 20 ^h : 57/1 R°: **m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	h m	h m	h m	h m	
0	177 00.2	-6 54.2	2 31.1	+9 22.4	153	60 N	17 32	18 14	19 02	17 50	93	6 55	1				
1	192 00.3	53.2	17 03.2	+9 07.1	153	58	35	15	19 00	53 89	51 4						
2	207 00.4	52.3	31 35.3	+8 51.8	153	56	38	16	18 59	55 86	47 7						
3	222 00.6	51.3	46 07.5	36.5	153	54	41	16	57	57 83	44 10						
4	237 00.7	50.4	60 39.7	21.1	154	52	43	17	56	17 59 80	41 12						
5	252 00.8	-6 49.4	75 12.1	+8 05.7	154	50	17 45	18 18	18 55	18 01 77	6 38 15						
6	267 01.0	-6 48.4	89 44.5	+7 50.3	154	45	17 50	18 19	18 53	18 05 72	6 32 20						
7	282 01.1	47.5	104 16.9	34.8	155	40	54	21	52	08 67	27 24						
8	297 01.2	46.5	118 49.4	19.3	155	35	17 57	23	52	11 63	23 27						
9	312 01.4	45.6	133 22.0	+7 03.9	156	30	18 00	24	52	13 60	19 31						
10	327 01.5	44.6	147 54.6	+6 48.3	156	20	06	28	53	17 55	12 36						
11	342 01.6	-6 43.6	162 27.3	+6 32.8	155	10 N	18 11	18 32	18 56	18 21 49	6 06 41						
12	357 01.8	-6 42.7	177 00.0	+6 17.3	155	0	18 15	18 36	19 00	18 24 45	6 01 45						
13	12 01.9	41.7	191 32.8	+6 01.7	156	10 S	20	41	06	27 41	5 55 50						
14	27 02.0	40.8	206 05.7	+5 46.2	155	20	25	47	13	31 35	49 55						
15	42 02.2	39.8	220 38.6	30.6	156	30	31	18 55	24	35 30	41 62						
16	57 02.3	38.8	235 11.5	+5 15.0	156	35	35	19 00	30	37 27	37 65						
17	72 02.4	-6 37.9	249 44.5	+4 59.4	156	40	18 39	19 06	19 39	18 40 23	5 33 68						
18	87 02.6	-6 36.9	264 17.6	+4 43.8	156	45	18 43	19 13	19 49	18 43 19	5 27 73						
19	102 02.7	36.0	278 50.7	28.2	156	50	49	22	20 02	47 14	20 79						
20	117 02.8	35.0	293 23.8	+4 12.5	157	52	51	26	09	48 12	17 81						
21	132 03.0	34.0	307 57.0	+3 56.9	156	54	54	31	16	50 9	14 84						
22	147 03.1	33.1	322 30.3	41.3	156	56	18 57	36	24	52 7	10 87						
23	162 03.2	32.1	337 03.5	25.6	157	58	19 01	42	33	54 4	06 90						
24	177 03.4	-6 31.2	351 36.9	+3 10.0	156	60 S	19 05	19 49	20 45	18 57 0	5 01 95						

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 14.7 ^m		Mag: -3.9 PMG: 13 ^h 04 ^m		Mag: +1.0 PMG: 11 ^h 28 ^m		Mag: -2.4 PMG: 20 ^h 20 ^m		Mag: +1.0 PMG: 13 ^h 25 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	160 47.2	164 12.0	-2 55.4	187 59.9	-12 23.0	54 15.2	+22 55.0	158 08.4	-1 10.4	
1	175 49.7	179 11.6	54.1	203 00.4	22.3	69 17.8	55.0	173 10.5	10.3	
2	190 52.2	194 11.3	52.9	218 01.0	21.6	84 20.3	55.0	188 12.7	10.1	
3	205 54.6	209 10.9	51.6	233 01.6	20.9	99 22.8	55.1	203 14.9	10.0	
4	220 57.1	224 10.5	50.3	248 02.2	20.2	114 25.4	55.1	218 17.1	09.9	
5	235 59.6	239 10.1	-2 49.0	263 02.7	-12 19.5	129 27.9	+22 55.1	233 19.3	-1 09.8	
6	251 02.0	254 09.7	-2 47.8	278 03.3	-12 18.8	144 30.4	+22 55.1	248 21.5	-1 09.6	
7	266 04.5	269 09.4	46.5	293 03.9	18.1	159 33.0	55.1	263 23.7	09.5	
8	281 06.9	284 09.0	45.2	308 04.5	17.4	174 35.5	55.1	278 25.9	09.4	
9	296 09.4	299 08.6	43.9	323 05.1	16.7	189 38.0	55.1	293 28.1	09.3	
10	311 11.9	314 08.2	42.6	338 05.6	16.0	204 40.6	55.1	308 30.2	09.2	
11	326 14.3	329 07.9	-2 41.4	353 06.2	-12 15.3	219 43.1	+22 55.1	323 32.4	-1 09.0	
12	341 16.8	344 07.5	-2 40.1	8 06.8	-12 14.6	234 45.6	+22 55.1	338 34.6	-1 08.9	
13	356 19.3	359 07.1	38.8	23 07.4	13.9	249 48.1	55.2	353 36.8	08.8	
14	11 21.7	14 06.7	37.5	38 08.0	13.2	264 50.7	55.2	8 39.0	08.7	
15	26 24.2	29 06.3	36.3	53 08.5	12.5	279 53.2	55.2	23 41.2	08.6	
16	41 26.7	44 06.0	35.0	68 09.1	11.8	294 55.7	55.2	38 43.4	08.4	
17	56 29.1	59 05.6	-2 33.7	83 09.7	-12 11.1	309 58.3	+22 55.2	53 45.6	-1 08.3	
18	71 31.6	74 05.2	-2 32.4	98 10.3	-12 10.4	325 00.8	+22 55.2	68 47.8	-1 08.2	
19	86 34.0	89 04.8	31.1	113 10.9	09.7	340 03.3	55.2	83 49.9	08.1	
20	101 36.5	104 04.5	29.9	128 11.5	09.0	355 05.9	55.2	98 52.1	08.0	
21	116 39.0	119 04.1	28.6	143 12.0	08.3	10 08.4	55.2	113 54.3	07.8	
22	131 41.4	134 03.7	27.3	158 12.6	07.6	25 10.9	55.2	128 56.5	07.7	
23	146 43.9	149 03.3	26.0	173 13.2	06.9	40 13.4	55.3	143 58.7	07.6	
24	161 46.4	164 03.0	-2 24.7	188 13.8	-12 06.2	55 16.0	+22 55.3	159 00.9	-1 07.5	
Dif	—	-4	+13	+6	+7	+25	0	+22	+	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG:12 ^h 11.7 ^m			Edad: 14.5 ^d SD: 15'5 PMG: 0 ^h 35 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	177	03.4	-6	31.2	351	36.9	+3	10.0	60 N	5	20	6	08	6	50	19	21	90
1	192	03.5		30.2	6	10.2	+2	54.4	58	22	08	47	20	86	54	54	**	
2	207	03.6		29.2	20	43.6		38.8	56	24	07	44	19	82	53	5	5	
3	222	03.8		28.3	35	17.1		23.1	54	25	06	42	18	80	52	8	8	
4	237	03.9		27.3	49	50.6	+2	07.5	52	27	06	39	18	76	52	10	10	
5	252	04.1	-6	26.4	64	24.1	+1	51.9	50	5	28	6	05	6	37	19	17	74
6	267	04.2	-6	25.4	78	57.6	+1	36.3	45	5	30	6	03	6	33	19	15	69
7	282	04.3		24.4	93	31.2		20.7	40	31	02	29	14	65	50	21		
8	297	04.5		23.5	108	04.8	+1	05.1	35	31	6	00	26	13	61	49	25	
9	312	04.6		22.5	122	38.5	+0	49.5	30	31	5	59	23	12	58	48	28	
10	327	04.7		21.5	137	12.2		33.9	20	30	55	18	10	52	47	34		
11	342	04.9	-6	20.6	151	45.9	+0	18.4	10 N	5	27	5	52	6	13	19	09	47
12	357	05.0	-6	19.6	166	19.6	+0	02.8	0	5	23	5	48	6	08	19	08	42
13	12	05.2		18.7	180	53.4	-0	12.7	10 S	18	43	6	04	06	39	44	48	
14	27	05.3		17.7	195	27.2		28.2	20	11	37	5	59	05	33	43	52	
15	42	05.4		16.7	210	01.0		43.7	30	5	00	29	53	03	28	42	58	
16	57	05.6		15.8	224	34.8	-0	59.2	35	4	54	24	50	03	24	41	61	
17	72	05.7	-6	14.8	239	08.7	-1	14.7	40	4	45	5	18	5	46	19	02	21
18	87	05.8	-6	13.8	253	42.6	-1	30.1	45	4	35	5	11	5	41	19	01	17
19	102	06.0		12.9	268	16.5	-1	45.5	50	22	5	02	36	18	59	13	38	75
20	117	06.1		11.9	282	50.4	-2	00.9	52	16	4	58	33	59	10	37	77	
21	132	06.3		10.9	297	24.4		16.3	54	09	54	30	58	8	36	80		
22	147	06.4		10.0	311	58.3		31.7	56	4	00	48	27	57	6	36	83	
23	162	06.5		09.0	326	32.3	-2	47.0	58	3	51	43	24	57	2	35	86	
24	177	06.7	-6	08.1	341	06.3	-3	02.3	60 S	3	40	4	36	5	20	18	56	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 10.7 ^m		Mag: -3.9 PMG: 13 ^h 04 ^m		Mag: +1.0 PMG: 11 ^h 27 ^m		Mag: -2.4 PMG: 20 ^h 16 ^m		Mag: +1.0 PMG: 13 ^h 22 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	161	46.4	164	03.0	-2	24.7	188	13.8	-12	06.2
1	176	48.8	179	02.6		23.5	203	14.4		05.5
2	191	51.3	194	02.2		22.2	218	14.9		04.8
3	206	53.8	209	01.8		20.9	233	15.5		04.1
4	221	56.2	224	01.5		19.6	248	16.1		03.4
5	236	58.7	239	01.1	-2	18.3	263	16.7	-12	02.7
6	252	01.2	254	00.7	-2	17.1	278	17.3	-12	02.0
7	267	03.6	269	00.3		15.8	293	17.9		01.3
8	282	06.1	283	59.9		14.5	308	18.4	-12	00.6
9	297	08.5	298	59.6		13.2	323	19.0	-11	59.9
10	312	11.0	313	59.2		11.9	338	19.6		59.2
11	327	13.5	328	58.8	-2	10.7	353	20.2	-11	58.5
12	342	15.9	343	58.5	-2	09.4	8	20.8	-11	57.8
13	357	18.4	358	58.1		08.1	23	21.4		57.1
14	12	20.9	13	57.7		06.8	38	21.9		56.4
15	27	23.3	28	57.3		05.5	53	22.5		55.7
16	42	25.8	43	57.0		04.3	68	23.1		55.0
17	57	28.3	58	56.6	-2	03.0	83	23.7	-11	54.3
18	72	30.7	73	56.2	-2	01.7	98	24.3	-11	53.6
19	87	33.2	88	55.8	-2	00.4	113	24.9		52.8
20	102	35.6	103	55.5	-1	59.1	128	25.5		52.1
21	117	38.1	118	55.1		57.9	143	26.0		51.4
22	132	40.6	133	54.7		56.6	158	26.6		50.7
23	147	43.0	148	54.3		55.3	173	27.2		50.0
24	162	45.5	163	54.0	-1	54.0	188	27.8	-11	49.3
Dif	—		-4	+13			+6	+7		
									+25	0
										+22
										+

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG:12 ^h 11.4 ^m			Edad: 15.5 ^d SD: 15 ^h 4 PMG: 1 ^h 18 ^m							PHE { 4 ^h : 56 ^h 3 12 ^h : 56 ^h 1 20 ^h : 55 ^h 9 R°: 44 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	h m	h m	h m	
0	177 06.7	-6 08.1	341 06.3	150	-3 02.3	153	60 N	17 37	18 19	19 07	20 51	91	6 53	1		
1	192 06.8	07.1	355 40.3	150	17.6	152	58	40	19	05	46 87		56 4			
2	207 07.0	06.1	10 14.3	150	32.8	152	56	42	20	03	41 84		6 58 7			
3	222 07.1	05.2	24 48.3	150	-3 48.1	153	54	45	20	01	38 80		7 00 10			
4	237 07.2	04.2	39 22.4	151	-4 03.2	151	52	47	20	19 00	34 78		02 12			
5	252 07.4	-6 03.2	53 56.4	150	-4 18.4	152	50	17 49	18 21	18 58	20 31	75	7 04	14		
6	267 07.5	-6 02.3	68 30.5	151	-4 33.5	151	45	17 53	18 22	18 56	20 24	70	7 08	19		
7	282 07.7	01.3	83 04.6	151	-4 48.6	151	40	56	23	55	19 65		11 23			
8	297 07.8	-6 00.3	97 38.6	150	-5 03.7	151	35	17 59	24	54	14 62		14 27			
9	312 08.0	-5 59.4	112 12.7	151	18.7	150	30	18 02	26	53	10 58		16 30			
10	327 08.1	58.4	126 46.8	151	33.7	150	20	06	28	54	20 02	54	21 35			
11	342 08.2	-5 57.4	141 20.9	151	-5 48.6	149	10 N	18 11	18 32	18 56	19 56	49	7 24	40		
12	357 08.4	-5 56.5	155 55.0	151	-6 03.5	149	0	18 15	18 36	19 00	19 50	45	7 28	44		
13	12 08.5	55.5	170 29.1	151	18.4	149	10 S	19	40	05	45 40		32 48			
14	27 08.7	54.5	185 03.2	151	33.2	148	20	23	46	12	38 36		35 54			
15	42 08.8	53.6	199 37.2	150	-6 48.0	148	30	29	53	21	31 31		40 59			
16	57 08.9	52.6	214 11.3	151	-7 02.8	148	35	32	18 57	28	27 28		42 62			
17	72 09.1	-5 51.6	228 45.4	151	-7 17.5	147	40	18 35	19 03	19 35	19 23	24	7 45	66		
18	87 09.2	-5 50.7	243 19.5	151	-7 32.1	146	45	18 40	19 09	19 45	19 18	20	7 49	70		
19	102 09.4	49.7	257 53.6	151	-7 46.7	146	50	45	18	19 57	12 15		53 75			
20	117 09.5	48.7	272 27.7	151	-8 01.3	146	52	47	21	20 03	09 13		54 78			
21	132 09.7	47.8	287 01.7	150	15.8	145	54	49	26	10	06 10		56 81			
22	147 09.8	46.8	301 35.8	151	30.3	145	56	52	31	18	19 03	7	7 59	83		
23	162 10.0	45.8	316 09.8	150	44.7	144	58	55	36	27	18 59	4	8 01	87		
24	177 10.1	-5 44.9	330 43.9	151	-8 59.1	144	60 S	18 59	19 42	20 37	18 55	0	8 04	91		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 06.8 ^m		Mag: -3.9 PMG: 13 ^h 05 ^m		Mag: +1.0 PMG: 11 ^h 26 ^m		Mag: -2.4 PMG: 20 ^h 12 ^m		Mag: +1.0 PMG: 13 ^h 18 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	162 45.5	163 54.0	-1 54.0	188 27.8	-11 49.3	56 16.5	+22 55.5	159 53.4	-1 04.6	
1	177 48.0	178 53.6	52.7	203 28.4	48.6	71 19.0	55.5	174 55.6	04.4	
2	192 50.4	193 53.2	51.4	218 29.0	47.9	86 21.5	55.5	189 57.8	04.3	
3	207 52.9	208 52.8	50.2	233 29.6	47.2	101 24.1	55.5	205 00.0	04.2	
4	222 55.4	223 52.5	48.9	248 30.1	46.5	116 26.6	55.5	220 02.2	04.1	
5	237 57.8	238 52.1	-1 47.6	263 30.7	-11 45.8	131 29.1	+22 55.5	235 04.3	-1 03.9	
6	253 00.3	253 51.7	-1 46.3	278 31.3	-11 45.1	146 31.6	+22 55.5	250 06.5	-1 03.8	
7	268 02.8	268 51.4	45.0	293 31.9	44.4	161 34.1	55.5	265 08.7	03.7	
8	283 05.2	283 51.0	43.8	308 32.5	43.7	176 36.6	55.5	280 10.9	03.6	
9	298 07.7	298 50.6	42.5	323 33.1	43.0	191 39.1	55.5	295 13.1	03.5	
10	313 10.1	313 50.2	41.2	338 33.7	42.2	206 41.7	55.5	310 15.3	03.3	
11	328 12.6	328 49.9	-1 39.9	353 34.2	-11 41.5	221 44.2	+22 55.6	325 17.5	-1 03.2	
12	343 15.1	343 49.5	-1 38.6	8 34.8	-11 40.8	236 46.7	+22 55.6	340 19.7	-1 03.1	
13	358 17.5	358 49.1	37.3	23 35.4	40.1	251 49.2	55.6	355 21.8	03.0	
14	13 20.0	13 48.8	36.1	38 36.0	39.4	266 51.7	55.6	10 24.0	02.9	
15	28 22.5	28 48.4	34.8	53 36.6	38.7	281 54.2	55.6	25 26.2	02.7	
16	43 24.9	43 48.0	33.5	68 37.2	38.0	296 56.7	55.6	40 28.4	02.6	
17	58 27.4	58 47.6	-1 32.2	83 37.8	-11 37.3	311 59.3	+22 55.6	55 30.6	-1 02.5	
18	73 29.9	73 47.3	-1 30.9	98 38.4	-11 36.6	327 01.8	+22 55.6	70 32.8	-1 02.4	
19	88 32.3	88 46.9	29.6	113 39.0	35.9	342 04.3	55.6	85 35.0	02.2	
20	103 34.8	103 46.5	28.4	128 39.5	35.1	357 06.8	55.6	100 37.1	02.1	
21	118 37.2	118 46.2	27.1	143 40.1	34.4	12 09.3	55.6	115 39.3	02.0	
22	133 39.7	133 45.8	25.8	158 40.7	33.7	27 11.8	55.6	130 41.5	01.9	
23	148 42.2	148 45.4	24.5	173 41.3	33.0	42 14.3	55.6	145 43.7	01.8	
24	163 44.6	163 45.1	-1 23.2	188 41.9	-11 32.3	57 16.8	+22 55.7	160 45.9	-1 01.6	
Dif	—	-4	+13	+6	+7	+25	0	+22	+	

UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1 PMG:12 ^h 11.2 ^m			Edad: 16.5 ^d PHE { 4 ^h : 55 ^h 7 12 ^h : 55 ^h 5 20 ^h : 55 ^h 3 R°: 43 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m				
0	177	10.1	-5	44.9	330	43.9	-8	59.1	60 N	5	14	6	02	6	44	22	20	91	6	52	0
1	192	10.2		43.9	345	17.9	-9	13.5	58	17		02	41		11	87	6	58	4		
2	207	10.4		42.9	359	51.9		27.7	56	19		02	39		22	03	83	7	04	6	
3	222	10.5		41.9	14	25.9		42.0	54	21		02	37		21	56	79		09	9	
4	237	10.7		41.0	28	59.9	-9	56.1	52	22		01	35		50	76		13	12		
5	252	10.8	-5	40.0	43	33.9	-10	10.3	50	5	24	6	01	6	33	21	45	73	7	17	14
6	267	11.0	-5	39.0	58	07.8	-10	24.3	45	5	26	6	00	6	29	21	33	68	7	26	19
7	282	11.1		38.1	72	41.8		38.3	40	28	5	59	26	23	64	33	23				
8	297	11.3		37.1	87	15.7	-10	52.3	35	28		58	23	14	61	39	27				
9	312	11.4		36.1	101	49.6	-11	06.2	30	29		57	20	21	07	58		45	29		
10	327	11.5		35.2	116	23.5		20.0	20	28		54	16	20	54	53	7	54	35		
11	342	11.7	-5	34.2	130	57.4	-11	33.8	10 N	5	26	5	51	6	12	20	44	48	8	03	39
12	357	11.8	-5	33.2	145	31.3	-11	47.5	0	5	23	5	47	6	08	20	33	45	8	11	43
13	12	12.0		32.3	160	05.1	-12	01.2	10 S	18		43	6	04	23	40		19	48		
14	27	12.1		31.3	174	38.9		14.8	20	11		37	5	59	12	36		27	53		
15	42	12.3		30.3	189	12.7		28.4	30	5	02	30	54	20	00	31		37	58		
16	57	12.4		29.3	203	46.4		41.8	35	4	56	26	51	19	53	28		43	61		
17	72	12.6	-5	28.4	218	20.2	-12	55.2	40	4	48	5	20	5	48	19	45	25	8	50	64
18	87	12.7	-5	27.4	232	53.9	-13	08.6	45	4	38	5	14	5	44	19	36	21	8	57	68
19	102	12.9		26.4	247	27.6		21.9	50	26		06	39	25	16	9	06	74			
20	117	13.0		25.5	262	01.2		35.1	52	20	5	02	37	20	14	11	76				
21	132	13.2		24.5	276	34.9	-13	48.2	54	13	4	58	34	15	10	15	79				
22	147	13.3		23.5	291	08.5	-14	01.3	56	4	06	53	31	09	7	21	82				
23	162	13.5		22.5	305	42.0		14.3	58	3	57	48	28	19	02	4	27	85			
24	177	13.6	-5	21.6	320	15.6	-14	27.3	60 S	3	47	4	41	5	25	18	54	0	9	33	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 02.9 ^m		Mag: -3.9 PMG: 13 ^h 05 ^m		Mag: +1.0 PMG: 11 ^h 25 ^m		Mag: -2.4 PMG: 20 ^h 08 ^m		Mag: +1.0 PMG: 13 ^h 15 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	163	44.6	163	45.1	-1	23.2	188	41.9	-11	32.3	57	16.8	+22	55.7	160	45.9	-1	01.6
1	178	47.1	178	44.7		21.9	203	42.5		31.6	72	19.3		55.7	175	48.1		01.5
2	193	49.6	193	44.3		20.6	218	43.1		30.9	87	21.8		55.7	190	50.3		01.4
3	208	52.0	208	43.9		19.4	233	43.7		30.2	102	24.4		55.7	205	52.5		01.3
4	223	54.5	223	43.6		18.1	248	44.3		29.5	117	26.9		55.7	220	54.6		01.1
5	238	57.0	238	43.2	-1	16.8	263	44.9	-11	28.7	132	29.4	+22	55.7	235	56.8	-1	01.0
6	253	59.4	253	42.8	-1	15.5	278	45.4	-11	28.0	147	31.9	+22	55.7	250	59.0	-1	00.9
7	269	01.9	268	42.5		14.2	293	46.0		27.3	162	34.4		55.7	266	01.2		00.8
8	284	04.4	283	42.1		12.9	308	46.6		26.6	177	36.9		55.7	281	03.4		00.7
9	299	06.8	298	41.7		11.7	323	47.2		25.9	192	39.4		55.7	296	05.6		00.5
10	314	09.3	313	41.4		10.4	338	47.8		25.2	207	41.9		55.7	311	07.8		00.4
11	329	11.7	328	41.0	-1	09.1	353	48.4	-11	24.5	222	44.4	+22	55.7	326	09.9	-1	00.3
12	344	14.2	343	40.6	-1	07.8	8	49.0	-11	23.8	237	46.9	+22	55.7	341	12.1	-1	00.2
13	359	16.7	358	40.2		06.5	23	49.6		23.0	252	49.4		55.7	356	14.3	-1	00.1
14	14	19.1	13	39.9		05.2	38	50.2		22.3	267	51.9		55.8	11	16.5	-0	59.9
15	29	21.6	28	39.5		03.9	53	50.8		21.6	282	54.4		55.8	26	18.7		59.8
16	44	24.1	43	39.1		02.7	68	51.4		20.9	297	56.9		55.8	41	20.9		59.7
17	59	26.5	58	38.8	-1	01.4	83	52.0	-11	20.2	312	59.4	+22	55.8	56	23.1	-0	59.6
18	74	29.0	73	38.4	-1	00.1	98	52.5	-11	19.5	328	01.9	+22	55.8	71	25.3	-0	59.4
19	89	31.5	88	38.0	-0	58.8	113	53.1		18.8	343	04.4		55.8	86	27.4		59.3
20	104	33.9	103	37.7		57.5	128	53.7		18.0	358	06.9		55.8	101	29.6		59.2
21	119	36.4	118	37.3		56.2	143	54.3		17.3	13	09.4		55.8	116	31.8		59.1
22	134	38.8	133	36.9		54.9	158	54.9		16.6	28	11.9		55.8	131	34.0		59.0
23	149	41.3	148	36.6		53.7	173	55.5		15.9	43	14.4		55.8	146	36.2		58.8
24	164	43.8	163	36.2	-0	52.4	188	56.1	-11	15.2	58	16.9	+22	55.8	161	38.4	-0	58.7
Dif	—		-4		+13		+6		+7		+25		0		+22		+	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 16'1 PMG:12 ^h 10.7 ^m			Edad: 18.5 ^d PHE { 4 ^h : 54'7 12 ^h : 54'6 20 ^h : 54'5 PMG: 3 ^h 28 ^m R°: 47 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m		
0	177	17.2	-4	58.2	309	29.6	-19	15.2	60 N	5	08	5	57	6	38	**	**	**	6	52	3
1	192	17.4		57.3	324	02.2		26.1	58	11		57	36		**	**	**	7	07	9	
2	207	17.5		56.3	338	34.7		37.0	56	14		57	34		**	**	**	19	14		
3	222	17.7		55.3	353	07.2		47.8	54	16		57	32		**	**	**	30	1		
4	237	17.8		54.3	7	39.6	-19	58.5	52	18		57	30		**	**	**	40	20		
5	252	18.0	-4	53.4	22	12.0	-20	09.1	50	5	19	5	57	6	29	**	**	**	7	49	22
6	267	18.1	-4	52.4	36	44.3	-20	19.6	45	5	22	5	56	6	26	23	48	66	8	08	27
7	282	18.3		51.4	51	16.6		30.0	40	24		56	23	30	63		23		31		
8	297	18.4		50.4	65	48.8		40.3	35	26		55	20	15	60		36		34		
9	312	18.6		49.5	80	21.0	-20	50.6	30	27		54	18	23	02	58		8	47	36	
10	327	18.8		48.5	94	53.1	-21	00.7	20	27		52	14	22	40	54		9	06	41	
11	342	18.9	-4	47.5	109	25.2	-21	10.7	10 N	5	25	5	50	6	11	22	21	51	9	23	44
12	357	19.1	-4	46.5	123	57.2	-21	20.7	0	5	23	5	47	6	07	22	04	48	9	39	48
13	12	19.2		45.5	138	29.2		30.5	10 S	18		43	04	21	46	45		9	55	51	
14	27	19.4		44.6	153	01.1		40.3	20	12		38	6	00	27	43		10	13	53	
15	42	19.5		43.6	167	33.0		49.9	30	5	03	32	5	56	21	06	38		32	58	
16	57	19.7		42.6	182	04.8	-21	59.4	35	4	57	27	53	20	53	37		44	60		
17	72	19.8	-4	41.6	196	36.6	-22	08.9	40	4	50	5	23	5	50	20	39	34	10	58	63
18	87	20.0	-4	40.7	211	08.3	-22	18.2	45	4	41	5	17	5	46	20	22	30	11	13	67
19	102	20.1		39.7	225	40.0		27.5	50	30		09	42	20	01	26		33	72		
20	117	20.3		38.7	240	11.6		36.6	52	24		06	40	19	51	23		43	74		
21	132	20.5		37.7	254	43.2		45.6	54	18		5	02	38	40	20		11	53	78	
22	147	20.6		36.8	269	14.7	-22	54.6	56	11		4	57	36	27	17		12	05	82	
23	162	20.8		35.8	283	46.1	-23	03.4	58	4	02	53	33	19	13	12		19	87		
24	177	20.9	-4	34.8	298	17.5	-23	12.1	60 S	3	53	4	47	5	30	18	56	5	12	36	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 55.0 ^m		Mag: -3.9 PMG: 13 ^h 06 ^m		Mag: +1.1 PMG: 11 ^h 23 ^m		Mag: -2.4 PMG: 20 ^h 00 ^m		Mag: +1.0 PMG: 13 ^h 08 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	165	42.9	163	27.4	189	10.4	59	16.8	162	30.8
1	180	45.4	178	27.0	204	11.0	74	19.3	177	33.0
2	195	47.8	193	26.7	219	11.6	89	21.8	192	35.2
3	210	50.3	208	26.3	234	12.2	104	24.3	207	37.4
4	225	52.8	223	25.9	249	12.8	119	26.8	222	39.6
5	240	55.2	238	25.6	264	13.4	134	29.3	237	41.7
6	255	57.7	253	25.2	279	14.0	149	31.8	252	43.9
7	271	00.2	268	24.8	294	14.6	164	34.3	267	46.1
8	286	02.6	283	24.5	309	15.2	179	36.8	282	48.3
9	301	05.1	298	24.1	324	15.8	194	39.3	297	50.5
10	316	07.6	313	23.7	339	16.4	209	41.7	312	52.7
11	331	10.0	328	23.4	354	17.0	224	44.2	327	54.8
12	346	12.5	343	23.0	9	17.6	239	46.7	342	57.0
13	1	14.9	358	22.6	24	18.2	254	49.2	357	59.2
14	16	17.4	13	22.3	39	18.8	269	51.7	13	01.4
15	31	19.9	28	21.9	54	19.4	284	54.2	28	03.6
16	46	22.3	43	21.5	69	20.0	299	56.7	43	05.8
17	61	24.8	58	21.2	84	20.6	314	59.1	58	08.0
18	76	27.3	73	20.8	99	21.2	330	01.6	73	10.1
19	91	29.7	88	20.4	114	21.8	345	04.1	88	12.3
20	106	32.2	103	20.1	129	22.4	0	06.6	103	14.5
21	121	34.7	118	19.7	144	23.0	15	09.1	118	16.7
22	136	37.1	133	19.4	159	23.6	30	11.6	133	18.9
23	151	39.6	148	19.0	174	24.2	45	14.1	148	21.1
24	166	42.1	163	18.6	189	24.8	60	16.5	163	23.2
Dif	—		-4	+13	+6	+7	+25	0	+22	+1

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna								
	SD: 16 ^h 1 PMG: 12 ^h 10.5 ^m			Edad: 19.5 ^d SD: 14 ^h 8 PMG: 4 ^h 15 ^m PHE { 4 ^h : 54 ^h 4 12 ^h : 54 ^h 3 20 ^h : 54 ^h 3 Rº: 50 ^m																						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	Rº	Hora	Rº								
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	m	h	m	m						
0	177	20.9	-4	34.8	298	17.5	-23	12.1	86	60 N	17	47	18	29	19	17	1	25	95	6	55	9				
1	192	21.1		33.8	312	48.9		20.7	86	58	49	28	14	1	05	86		7	16	17						
2	207	21.2		32.9	327	20.2		29.3	86	56	51	28	11	0	48	81		33	22							
3	222	21.4		31.9	341	51.5		37.7	84	54	52	28	09	34	77		7	47	26							
4	237	21.6		30.9	356	22.7		46.0	83	52	54	27	07	22	74		8	00	29							
5	252	21.7	-4	29.9	10	53.8	-23	54.1	81	50	17	55	18	27	19	05	0	11	72	8	11	32				
6	267	21.9	-4	28.9	25	24.9	-24	02.2	81	45	17	58	18	27	19	01	**	**	**	8	35	35				
7	282	22.0		28.0	39	55.9		10.2	80	40	18	00	27	18	59	**	**	**	8	54	38					
8	297	22.2		27.0	54	26.9		18.0	78	35	02	28	57	**	**	**		9	10	41						
9	312	22.3		26.0	68	57.9		25.8	78	30	04	28	56	**	**	**		23	43							
10	327	22.5		25.0	83	28.7		33.4	76	20	08	30	55	23	34	56		9	47	46						
11	342	22.7	-4	24.1	97	59.6	-24	40.9	75	10 N	18	11	18	32	18	56	23	12	54	10	07	49				
12	357	22.8	-4	23.1	112	30.4	-24	48.3	74	0	18	14	18	34	18	59	22	52	51	10	27	50				
13	12	23.0		22.1	127	01.1	-24	55.6	73	10 S	17		38	19	02		31	50	10	46	53					
14	27	23.1		21.1	141	31.8	-25	02.8	72	20	20		42	08	22	10	48		11	06	56					
15	42	23.3		20.1	156	02.4		09.9	71	30	24		48	16	21	44	46		30	59						
16	57	23.4		19.2	170	33.0		16.8	69	35	27		52	22		30	44		11	44	61					
17	72	23.6	-4	18.2	185	03.5	-25	23.7	69	40	18	29	18	56	19	29	21	13	42	12	01	62				
18	87	23.8	-4	17.2	199	33.9	-25	30.4	67	45	18	32	19	02	19	37	20	52	40	12	20	65				
19	102	23.9		16.2	214	04.4		37.0	66	50	36		09	48		27	36		45	69						
20	117	24.1		15.2	228	34.7		43.5	65	52	38		12	53		14	35		12	57	71					
21	132	24.2		14.3	243	05.1		49.8	63	54	40		16	19	59	20	00	32	13	11	74					
22	147	24.4		13.3	257	35.3	-25	56.1	63	56	42		20	20	06	19	44	28		27	77					
23	162	24.6		12.3	272	05.5	-26	02.2	61	58	44		24	14		25	23		13	46	82					
24	177	24.7	-4	11.3	286	35.7	-26	08.2	60	60 S	18	47	19	30	20	23	19	01	14	14	09	92				
UT	ARIES PMG 12 ^h 51.1 ^m			VENUS Mag: -3.9 PMG: 13 ^h 07 ^m			MARTE Mag: +1.1 PMG: 11 ^h 22 ^m			JÚPITER Mag: -2.4 PMG: 19 ^h 56 ^m			SATURNO Mag: +1.0 PMG: 13 ^h 05 ^m													
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec												
h	°	'		°	'		°	'		°	'		°	'		°	'		°	'						
0	166	42.1		163	18.6	+0	189	24.8	-10	60	16.5	+22	56.1		163	23.2	-0	52.8								
1	181	44.5		178	18.3		204	25.4		39.9	75	19.0	56.1		178	25.4		52.7								
2	196	47.0		193	17.9		219	26.0		39.2	90	21.5	56.1		193	27.6		52.6								
3	211	49.4		208	17.5		234	26.6		38.4	105	24.0	56.1		208	29.8		52.5								
4	226	51.9		223	17.2		249	27.2		37.7	120	26.5	56.1		223	32.0		52.4								
5	241	54.4		238	16.8	+0	264	27.8	-10	37.0	135	28.9	+22	56.1	238	34.2	-0	52.2								
6	256	56.8		253	16.4	+0	279	28.4	-10	36.3	150	31.4	+22	56.1	253	36.3	-0	52.1								
7	271	59.3		268	16.1		294	29.0		35.5	165	33.9		56.1	268	38.5		52.0								
8	287	01.8		283	15.7		309	29.6		34.8	180	36.4		56.1	283	40.7		51.9								
9	302	04.2		298	15.3		324	30.2		34.1	195	38.9		56.1	298	42.9		51.7								
10	317	06.7		313	15.0		339	30.8		33.4	210	41.3		56.1	313	45.1		51.6								
11	332	09.2		328	14.6	+0	354	31.4	-10	32.6	225	43.8	+22	56.1	328	47.3	-0	51.5								
12	347	11.6		343	14.3	+0	9	32.0	-10	31.9	240	46.3	+22	56.1	343	49.5	-0	51.4								
13	2	14.1		358	13.9		24	32.6		31.2	255	48.8		56.1	358	51.6		51.3								
14	17	16.6		13	13.5		39	33.2		30.5	270	51.3		56.1	13	53.8		51.1								
15	32	19.0		28	13.2		54	33.8		29.7	285	53.7		56.1	28	56.0		51.0								
16	47	21.5		43	12.8		69	34.4		29.0	300	56.2		56.1	43	58.2		50.9								
17	62	23.9		58	12.4	+0	84	35.0	-10	28.3	315	58.7	+22	56.1	59	00.4	-0	50.8								
18	77	26.4		73	12.1	+0	99	35.6	-10	27.6	331	01.2	+22	56.1	74	02.6	-0	50.6								
19	92	28.9		88	11.7		114	36.2		26.8	346	03.6		56.1	89	04.7		50.5								
20	107	31.3		103	11.3		129	36.8		26.1	1	06.1		56.1	104	06.9		50.4								
21	122	33.8		118	11.0		144	37.4		25.4	16	08.6		56.1	119	09.1		50.3								
22	137	36.3		133	10.6		159	38.0		24.6	31	11.1		56.2	134	11.3		50.1								
23	152	38.7		148	10.3		174	38.6		23.9	46	13.5		56.2	149	13.5		50.0								
24	167	41.2		163	09.9	+0	189	39.2	-10	23.2	61	16.0	+22	56.2	164	15.7	-0	49.9								
Dif	—			-4			+13			+6			+7			+25			0			+22			+	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna									
	SD: 16'1 PMG:12 ^h 10.2 ^m				Edad: 20.5 ^d PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2 PMG: 5 ^h 04 ^m R°: 50 ^m																						
	hG ☉	Dec			hG ☾	Dif			Dec	Dif		Náutico	Civil		Hora	R°		Hora	R°								
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m						
0	177	24.7	-4	11.3	286	35.7	-26	08.2	58	60 N	5 02	5 51	6 32	2 59	85	7 02	20										
1	192	24.9		10.3	301	05.8		14.0	58	58	06	51	30	30	76	31	29										
2	207	25.0		09.4	315	35.9		19.8	56	56	09	52	29	2 08	71	7 54	33										
3	222	25.2		08.4	330	05.9		25.4	56	54	11	52	27	1 50	68	8 12	37										
4	237	25.4		07.4	344	35.9		30.9	55	52	13	52	26	34	66	28	38										
5	252	25.5	-4	06.4	359	05.9	-26	36.3	54	50	5 15	5 52	6 25	1 21	64	8 41	40										
6	267	25.7	-4	05.4	13	35.8	-26	41.6	53	45	5 19	5 53	6 22	0 54	61	9 09	43										
7	282	25.8		04.5	28	05.6		46.7	51	40	21	53	20	33	59	31	44										
8	297	26.0		03.5	42	35.4		51.7	50	35	23	52	18	15	58	9 49	46										
9	312	26.2		02.5	57	05.1	-26	56.6	49	30	24	52	16	0 00	56	10 05	47										
10	327	26.3		01.5	71	34.9	-27	01.4	48	20	25	51	13	**	**	**	31	49									
11	342	26.5	-4	00.5	86	04.5	-27	06.0	46	10 N	5 24	5 49	6 10	**	**	**	10 54	50									
12	357	26.6	-3	59.6	100	34.1	-27	10.5	45	0	5 22	5 46	6 07	23	42	52	11 16	51									
13	12	26.8		58.6	115	03.7		14.9	44	10 S	18	43	04	23	20	51	11 37	52									
14	27	27.0		57.6	129	33.3		19.2	41	20	13	39	6 01	22	56	51	12 00	54									
15	42	27.1		56.6	144	02.8		23.3	40	30	5 05	33	5 57	29	49	27	55										
16	57	27.3		55.6	158	32.2		27.3	38	35	4 59	29	55	22	12	50	12 43	56									
17	72	27.5	-3	54.7	173	01.7	-27	31.1	36	40	4 53	5 25	5 52	21	53	49	13 02	56									
18	87	27.6	-3	53.7	187	31.0	-27	34.9	38	45	4 44	5 19	5 49	21	31	47	13 24	58									
19	102	27.8		52.7	202	00.4		38.5	34	50	33	13	45	21	02	46	13 53	59									
20	117	27.9		51.7	216	29.7		41.9	32	52	28	10	44	20	47	46	14 07	61									
21	132	28.1		50.7	230	59.0		45.3	32	54	22	06	42	31	44	23	62										
22	147	28.3		49.8	245	28.2		48.5	31	56	16	5 02	40	20	11	42	14 43	64									
23	162	28.4		48.8	259	57.4		51.6	29	58	4 08	4 57	38	19	47	39	15 07	67									
24	177	28.6	-3	47.8	274	26.6	-27	54.5	29	60 S	3 59	4 52	5 35	19	14	33	15 39	74									
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 12 ^h 47.2 ^m			Mag: -3.9 PMG: 13 ^h 08 ^m			Mag: +1.1 PMG: 11 ^h 21 ^m			Mag: -2.4 PMG: 19 ^h 52 ^m			Mag: +1.0 PMG: 13 ^h 01 ^m														
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	167	41.2	163	09.9	+0	40.3	189	39.2	-10	23.2	61	16.0	+22	56.2	164	15.7	-0	49.9									
1	182	43.7	178	09.5		41.6	204	39.8		22.5	76	18.5		56.2	179	17.8		49.8									
2	197	46.1	193	09.2		42.9	219	40.4		21.7	91	21.0		56.2	194	20.0		49.7									
3	212	48.6	208	08.8		44.2	234	41.0		21.0	106	23.4		56.2	209	22.2		49.5									
4	227	51.0	223	08.4		45.5	249	41.7		20.3	121	25.9		56.2	224	24.4		49.4									
5	242	53.5	238	08.1	+0	46.7	264	42.3	-10	19.5	136	28.4	+22	56.2	239	26.6	-0	49.3									
6	257	56.0	253	07.7	+0	48.0	279	42.9	-10	18.8	151	30.9	+22	56.2	254	28.8	-0	49.2									
7	272	58.4	268	07.3		49.3	294	43.5		18.1	166	33.3		56.2	269	30.9		49.0									
8	288	00.9	283	07.0		50.6	309	44.1		17.4	181	35.8		56.2	284	33.1		48.9									
9	303	03.4	298	06.6		51.9	324	44.7		16.6	196	38.3		56.2	299	35.3		48.8									
10	318	05.8	313	06.3		53.2	339	45.3		15.9	211	40.7		56.2	314	37.5		48.7									
11	333	08.3	328	05.9	+0	54.5	354	45.9	-10	15.2	226	43.2	+22	56.2	329	39.7	-0	48.6									
12	348	10.8	343	05.5	+0	55.8	9	46.5	-10	14.4	241	45.7	+22	56.2	344	41.9	-0	48.4									
13	3	13.2	358	05.2		57.0	24	47.1		13.7	256	48.1		56.2	359	44.0		48.3									
14	18	15.7	13	04.8		58.3	39	47.7		13.0	271	50.6		56.2	14	46.2		48.2									
15	33	18.2	28	04.4	+0	59.6	54	48.3		12.2	286	53.1		56.2	29	48.4		48.1									
16	48	20.6	43	04.1	+1	00.9	69	48.9		11.5	301	55.6		56.2	44	50.6		47.9									
17	63	23.1	58	03.7	+1	02.2	84	49.5	-10	10.8	316	58.0	+22	56.2	59	52.8	-0	47.8									
18	78	25.5	73	03.3	+1	03.5	99	50.1	-10	10.1	332	00.5	+22	56.2	74	55.0	-0	47.7									
19	93	28.0	88	03.0		04.8	114	50.7		09.3	347	03.0		56.2	89	57.1		47.6									
20	108	30.5	103	02.6		06.1	129	51.3		08.6	2	05.4		56.2	104	59.3		47.4									
21	123	32.9	118	02.3		07.3	144	52.0		07.9	17	07.9		56.2	120	01.5		47.3									
22	138	35.4	133	01.9		08.6	159	52.6		07.1	32	10.4		56.2	135	03.7		47.2									
23	153	37.9	148	01.5		09.9	174	53.2		06.4	47	12.8		56.2	150	05.9		47.1									
24	168	40.3	163	01.2	+1	11.2	189	53.8	-10	05.7	62	15.3	+22	56.2	165	08.0	-0	47.0									
Dif	—			-4			+13			+6			+7			+25			0			+22			+1		

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG:12 ^h 10.0 ^m			Edad: 21.5 ^d SD: 14'8 PMG: 5 ^h 54 ^m PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4 Rº: 54 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	Rº	Hora	Rº	
h	° /	° /	° /	° /		° /		°		h m	h m	h m	h m	h m	h m	h m	h m	
0	177	28.6	-3	47.8	274	26.6	101	-27	54.5	28	60 N	17 52	18 34	19 22	4 24	59	7 22	52
1	192	28.8		46.8	288	55.7	101	-27	57.3	27	58	54	33	19	3 46	58	8 00	53
2	207	28.9		45.8	303	24.8	101	-28	00.0	25	56	55	32	15	3 19	57	27	54
3	222	29.1		44.8	317	53.9	101	-28	02.5	24	54	56	31	13	2 58	57	8 49	53
4	237	29.2		43.9	332	22.9	100		04.9	23	52	57	31	10	40	57	9 06	54
5	252	29.4	-3	42.9	346	51.9	100	-28	07.2	21	50	17 58	18 31	19 08	2 25	57	9 21	54
6	267	29.6	-3	41.9	1	20.9	100	-28	09.3	20	45	18 01	18 30	19 04	1 55	56	9 52	54
7	282	29.7		40.9	15	49.9	100		11.3	19	40	02	30	19 01	32	55	10 15	54
8	297	29.9		39.9	30	18.8	99		13.2	17	35	04	29	18 59	1 13	54	35	54
9	312	30.1		39.0	44	47.7	99		14.9	16	30	06	30	57	0 56	55	10 52	53
10	327	30.2		38.0	59	16.6	99		16.5	15	20	08	30	56	28	54	11 20	54
11	342	30.4	-3	37.0	73	45.4	98	-28	18.0	13	10 N	18 11	18 32	18 56	0 04	54	11 44	54
12	357	30.6	-3	36.0	88	14.3	99	-28	19.3	12	0	18 13	18 34	18 58	** ** *	**	12 07	53
13	12	30.7		35.0	102	43.1	98		20.5	10	10 S	16	37	19 01	** ** *	**	29	54
14	27	30.9		34.0	117	11.9	98		21.5	9	20	19	41	06	23 47	55	12 54	53
15	42	31.0		33.1	131	40.6	97		22.4	8	30	22	46	14	18	57	13 22	52
16	57	31.2		32.1	146	09.4	98		23.2	6	35	24	49	19	23 02	56	39	52
17	72	31.4	-3	31.1	160	38.1	97	-28	23.8	5	40	18 26	18 53	19 25	22 42	58	13 58	52
18	87	31.5	-3	30.1	175	06.9	98	-28	24.3	4	45	18 29	18 58	19 33	22 18	59	14 22	51
19	102	31.7		29.1	189	35.6	97		24.7	2	50	32	19 04	43	21 48	59	14 52	51
20	117	31.9		28.1	204	04.2	96		24.9	1	52	33	07	48	33	60	15 08	49
21	132	32.0		27.2	218	32.9	97		25.0	1	54	35	11	19 54	21 15	61	25	49
22	147	32.2		26.2	233	01.6	97		24.9	2	56	37	14	20 00	20 53	63	15 47	48
23	162	32.4		25.2	247	30.2	96		24.7	3	58	39	18	07	20 26	65	16 14	46
24	177	32.5	-3	24.2	261	58.9	97	-28	24.4		60 S	18 41	19 23	20 16	19 47	70	16 53	42
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 12 ^h 43.2 ^m		Mag: -3.9 PMG: 13 ^h 08 ^m			Mag: +1.1 PMG: 11 ^h 20 ^m			Mag: -2.4 PMG: 19 ^h 48 ^m			Mag: +1.0 PMG: 12 ^h 58 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /						
0	168	40.3	163	01.2	+1	11.2	189	53.8	-10	05.7	62	15.3	+22	56.2	165	08.0	-0	47.0
1	183	42.8	178	00.8		12.5	204	54.4		04.9	77	17.8		56.2	180	10.2		46.8
2	198	45.3	193	00.4		13.8	219	55.0		04.2	92	20.2		56.2	195	12.4		46.7
3	213	47.7	208	00.1		15.1	234	55.6		03.5	107	22.7		56.2	210	14.6		46.6
4	228	50.2	222	59.7		16.4	249	56.2		02.7	122	25.1		56.2	225	16.8		46.5
5	243	52.7	237	59.4	+1	17.6	264	56.8	-10	02.0	137	27.6	+22	56.2	240	19.0	-0	46.3
6	258	55.1	252	59.0	+1	18.9	279	57.4	-10	01.3	152	30.1	+22	56.2	255	21.1	-0	46.2
7	273	57.6	267	58.6		20.2	294	58.0	-10	00.5	167	32.5		56.2	270	23.3		46.1
8	289	00.0	282	58.3		21.5	309	58.6	-9	59.8	182	35.0		56.2	285	25.5		46.0
9	304	02.5	297	57.9		22.8	324	59.3		59.1	197	37.5		56.2	300	27.7		45.9
10	319	05.0	312	57.5		24.1	339	59.9		58.3	212	39.9		56.3	315	29.9		45.7
11	334	07.4	327	57.2	+1	25.4	355	00.5	-9	57.6	227	42.4	+22	56.3	330	32.1	-0	45.6
12	349	09.9	342	56.8	+1	26.7	10	01.1	-9	56.9	242	44.8	+22	56.3	345	34.2	-0	45.5
13	4	12.4	357	56.4		27.9	25	01.7		56.1	257	47.3		56.3	0	36.4		45.4
14	19	14.8	12	56.1		29.2	40	02.3		55.4	272	49.8		56.3	15	38.6		45.2
15	34	17.3	27	55.7		30.5	55	02.9		54.7	287	52.2		56.3	30	40.8		45.1
16	49	19.8	42	55.4		31.8	70	03.5		53.9	302	54.7		56.3	45	43.0		45.0
17	64	22.2	57	55.0	+1	33.1	85	04.1	-9	53.2	317	57.1	+22	56.3	60	45.2	-0	44.9
18	79	24.7	72	54.6	+1	34.4	100	04.7	-9	52.5	332	59.6	+22	56.3	75	47.3	-0	44.7
19	94	27.2	87	54.3		35.7	115	05.4		51.7	348	02.1		56.3	90	49.5		44.6
20	109	29.6	102	53.9		37.0	130	06.0		51.0	3	04.5		56.3	105	51.7		44.5
21	124	32.1	117	53.5		38.2	145	06.6		50.2	18	07.0		56.3	120	53.9		44.4
22	139	34.5	132	53.2		39.5	160	07.2		49.5	33	09.4		56.3	135	56.1		44.3
23	154	37.0	147	52.8		40.8	175	07.8		48.8	48	11.9		56.3	150	58.2		44.1
24	169	39.5	162	52.5	+1	42.1	190	08.4	-9	48.0	63	14.3	+22	56.3	166	00.4	-0	44.0
Dif	—		-4		+13		+6		+7		+25		0		+22		+	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG:12 ^h 09.7 ^m			Edad: 22.5 ^d SD: 14'8 PMG: 6 ^h 46 ^m												
	PHE { 4 ^h : 54'4 12 ^h : 54'6 20 ^h : 54'7 R°: 52 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m		h	m	m
0	177	32.5	-3	24.2	261	58.9	96	-28	24.4	5	60 N	4 56	5 45	6 26	5 22	25
1	192	32.7		23.2	276	27.5	96		23.9	6	58	5 00	46	25	4 42	34
2	207	32.9		22.2	290	56.1	96		23.3	8	56	03	46	23	4 15	38
3	222	33.0		21.3	305	24.7	96		22.5	9	54	06	47	22	3 53	41
4	237	33.2		20.3	319	53.3	96		21.6	10	52	09	48	21	35	42
5	252	33.4	-3	19.3	334	22.0	97	-28	20.6	12	50	5 11	5 48	6 20	3 20	43
6	267	33.5	-3	18.3	348	50.6	96	-28	19.4	13	45	5 15	5 49	6 18	2 49	46
7	282	33.7		17.3	3	19.1	95		18.1	15	40	18	50	16	26	47
8	297	33.9		16.3	17	47.7	96		16.6	16	35	20	50	15	2 06	48
9	312	34.0		15.4	32	16.3	96		15.0	17	30	22	50	14	1 49	49
10	327	34.2		14.4	46	44.9	96		13.3	19	20	23	49	11	1 21	50
11	342	34.4	-3	13.4	61	13.5	96	-28	11.4	20	10 N	5 23	5 48	6 09	0 56	51
12	357	34.5	-3	12.4	75	42.1	96	-28	09.4	22	0	5 22	5 46	6 06	0 34	52
13	12	34.7		11.4	90	10.7	96		07.2	23	10 S	19	43	04	0 11	53
14	27	34.9		10.4	104	39.3	96		04.9	24	20	14	39	6 01	**	**
15	42	35.0		09.5	119	08.0	97	-28	02.5	26	30	06	34	5 58	**	**
16	57	35.2		08.5	133	36.6	96	-27	59.9	27	35	5 01	31	56	23	57
17	72	35.4	-3	07.5	148	05.2	96	-27	57.2	29	40	4 55	5 27	5 54	23	38
18	87	35.5	-3	06.5	162	33.8	96	-27	54.3	30	45	4 47	5 22	5 52	23	15
19	102	35.7		05.5	177	02.5	97		51.3	31	50	37	16	49	22	46
20	117	35.9		04.5	191	31.1	96		48.2	33	52	32	13	47	32	70
21	132	36.0		03.5	205	59.8	97		44.9	34	54	27	10	46	22	15
22	147	36.2		02.6	220	28.5	97		41.5	36	56	21	06	44	21	55
23	162	36.4		01.6	234	57.2	97		37.9	37	58	13	5 02	42	21	30
24	177	36.6	-3	00.6	249	25.9	97	-27	34.2	37	60 S	4 05	4 58	5 40	20	55

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 39.3 ^m		Mag: -3.9 PMG: 13 ^h 09 ^m		Mag: +1.1 PMG: 11 ^h 19 ^m		Mag: -2.4 PMG: 19 ^h 44 ^m		Mag: +1.0 PMG: 12 ^h 54 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	169	39.5	162	52.5	+1	42.1	190	08.4	-9	48.0
1	184	41.9	177	52.1		43.4	205	09.0		47.3
2	199	44.4	192	51.7		44.7	220	09.6		46.6
3	214	46.9	207	51.4		46.0	235	10.2		45.8
4	229	49.3	222	51.0		47.2	250	10.9		45.1
5	244	51.8	237	50.6	+1	48.5	265	11.5	-9	44.4
6	259	54.3	252	50.3	+1	49.8	280	12.1	-9	43.6
7	274	56.7	267	49.9		51.1	295	12.7		42.9
8	289	59.2	282	49.5		52.4	310	13.3		42.1
9	305	01.6	297	49.2		53.7	325	13.9		41.4
10	320	04.1	312	48.8		55.0	340	14.5		40.7
11	335	06.6	327	48.5	+1	56.2	355	15.1	-9	39.9
12	350	09.0	342	48.1	+1	57.5	10	15.8	-9	39.2
13	5	11.5	357	47.7	+1	58.8	25	16.4		38.5
14	20	14.0	12	47.4	+2	00.1	40	17.0		37.7
15	35	16.4	27	47.0		01.4	55	17.6		37.0
16	50	18.9	42	46.6		02.7	70	18.2		36.2
17	65	21.4	57	46.3	+2	04.0	85	18.8	-9	35.5
18	80	23.8	72	45.9	+2	05.2	100	19.4	-9	34.8
19	95	26.3	87	45.6		06.5	115	20.1		34.0
20	110	28.8	102	45.2		07.8	130	20.7		33.3
21	125	31.2	117	44.8		09.1	145	21.3		32.5
22	140	33.7	132	44.5		10.4	160	21.9		31.8
23	155	36.1	147	44.1		11.7	175	22.5		31.1
24	170	38.6	162	43.7	+2	13.0	190	23.1	-9	30.3
Dif	—		-4		+13		+6		+7	
							+25		0	
									+22	
										+1

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1 PMG:12 ^h 09.4 ^m			Edad: 23.5 ^d SD: 14 ^h 9 PMG: 7 ^h 38 ^m							Civil		Náutico		Hora R°		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif											
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	177	36.6	-3	00.6	249	25.9	-27	34.2	60 N	17	57	18	39	19	28	5	47	
1	192	36.7	-2	59.6	263	54.6		30.4	58		58		37		23	5	16	
2	207	36.9		58.6	278	23.3		26.4	56	17	59		36		20	4	53	
3	222	37.1		57.6	292	52.1		22.3	54	18	00		35		17	34	28	
4	237	37.2		56.6	307	20.9		18.1	52		01		34		14	17	32	
5	252	37.4	-2	55.7	321	49.7	-27	13.7	50	18	02	18	34	19	11	4	03	
6	267	37.6	-2	54.7	336	18.5	-27	09.2	45	18	03	18	32	19	07	3	35	
7	282	37.7		53.7	350	47.3	-27	04.5	40		05		32		03	3	13	
8	297	37.9		52.7	5	16.2	-26	59.7	35		06		31		19	2	54	
9	312	38.1		51.7	19	45.0		54.8	30		07		31		18	38	45	
10	327	38.2		50.7	34	13.9		49.7	20		09		31		57	2	11	
11	342	38.4	-2	49.7	48	42.9	-26	44.5	10 N	18	11	18	32	18	56	1	47	
12	357	38.6	-2	48.8	63	11.8	-26	39.2	0	18	13	18	33	18	57	1	26	
13	12	38.8		47.8	77	40.8		33.7	10 S		15		36		19	1	04	
14	27	38.9		46.8	92	09.8		28.1	20		17		39		05	0	40	
15	42	39.1		45.8	106	38.8		22.4	30		19		43		11	0	13	
16	57	39.3		44.8	121	07.9		16.5	35		21		46		16	**	**	
17	72	39.4	-2	43.8	135	37.0	-26	10.5	40	18	23	18	50	19	22	**	**	
18	87	39.6	-2	42.8	150	06.1	-26	04.3	45	18	25	18	54	19	29	**	**	
19	102	39.8		41.9	164	35.2	-25	58.1	50		27		19		00	23	55	
20	117	39.9		40.9	179	04.4		51.7	52		29		03		43	42	79	
21	132	40.1		39.9	193	33.6		45.1	54		30		06		48	28	82	
22	147	40.3		38.9	208	02.9		38.4	56		31		09		54	23	11	
23	162	40.5		37.9	222	32.1		31.6	58		33		13		20	22	51	
24	177	40.6	-2	36.9	237	01.4	-25	24.7	60 S	18	35	19	17	20	09	22	26	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 12 ^h 35.4 ^m		Mag: -3.9 PMG: 13 ^h 09 ^m		Mag: +1.2 PMG: 11 ^h 18 ^m		Mag: -2.3 PMG: 19 ^h 40 ^m		Mag: +1.0 PMG: 12 ^h 51 ^m	
h	hG ♈	hG ♀	Dec		hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
0	170	38.6	162	43.7	+2	13.0	190	23.1	-9	30.3
1	185	41.1	177	43.4		14.2	205	23.7		29.6
2	200	43.5	192	43.0		15.5	220	24.4		28.8
3	215	46.0	207	42.6		16.8	235	25.0		28.1
4	230	48.5	222	42.3		18.1	250	25.6		27.4
5	245	50.9	237	41.9	+2	19.4	265	26.2	-9	26.6
6	260	53.4	252	41.6	+2	20.7	280	26.8	-9	25.9
7	275	55.9	267	41.2		22.0	295	27.4		25.1
8	290	58.3	282	40.8		23.2	310	28.1		24.4
9	306	00.8	297	40.5		24.5	325	28.7		23.7
10	321	03.3	312	40.1		25.8	340	29.3		22.9
11	336	05.7	327	39.7	+2	27.1	355	29.9	-9	22.2
12	351	08.2	342	39.4	+2	28.4	10	30.5	-9	21.4
13	6	10.6	357	39.0		29.7	25	31.1		20.7
14	21	13.1	12	38.6		30.9	40	31.7		20.0
15	36	15.6	27	38.3		32.2	55	32.4		19.2
16	51	18.0	42	37.9		33.5	70	33.0		18.5
17	66	20.5	57	37.5	+2	34.8	85	33.6	-9	17.7
18	81	23.0	72	37.2	+2	36.1	100	34.2	-9	17.0
19	96	25.4	87	36.8		37.4	115	34.8		16.2
20	111	27.9	102	36.5		38.7	130	35.5		15.5
21	126	30.4	117	36.1		39.9	145	36.1		14.8
22	141	32.8	132	35.7		41.2	160	36.7		14.0
23	156	35.3	147	35.4		42.5	175	37.3		13.3
24	171	37.8	162	35.0	+2	43.8	190	37.9	-9	12.5
Dif	—	-4	+13		+6	+7	+24	0	+22	+1

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16 ^h 1 PMG:12 ^h 09.2 ^m			Edad: 24.5 ^d PHE { 4 ^h : 55 ^h 3 12 ^h : 55 ^h 5 20 ^h : 55 ^h 7 R°: 50 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora	R°	Hora	R°							
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m			
0	177	40.6	-2	36.9	237	01.4	-25	24.7	71	60 N	4	50	5	39	6	20	5	57	3	11	12	99
1	192	40.8		35.9	251	30.8		17.6	72	58		54		40	19		34	11		33	92	
2	207	41.0		35.0	266	00.1		10.4	73	56	4	58		41	18		16	16	11	51	87	
3	222	41.1		34.0	280	29.5		03.1	74	54	5	01		42	17		5	01	19	12	06	82
4	237	41.3		33.0	294	59.0		55.7	76	52		04		43	17		4	48	22		18	80
5	252	41.5	-2	32.0	309	28.5		48.1	77	50	5	06	5	44	6	16	4	36	25	12	30	76
6	267	41.7	-2	31.0	323	58.0		40.4	79	45	5	11	5	45	6	15	4	12	30	12	53	71
7	282	41.8		30.0	338	27.5		32.5	79	40		15		46	13		3	52	34	13	12	67
8	297	42.0		29.0	352	57.1		24.6	81	35		18		47	12		3	36	37		27	64
9	312	42.2		28.1	7	26.7		16.5	82	30		20		47	11		3	22	39	13	41	61
10	327	42.4		27.1	21	56.4		08.3	84	20		22		47	09		2	58	43	14	03	57
11	342	42.5	-2	26.1	36	26.1		59.9	84	10 N	5	22	5	47	6	08	2	37	46	14	23	53
12	357	42.7	-2	25.1	50	55.8		51.5	84	0	5	21	5	45	6	06	2	17	50	14	41	49
13	12	42.9		24.1	65	25.6		42.9	86	10 S		19		43	04		1	57	53	14	59	46
14	27	43.0		23.1	79	55.4		34.2	87	20		14		40	02		3	6	57	15	19	41
15	42	43.2		22.1	94	25.3		25.3	89	30		08		36	6	00	1	12	60		41	37
16	57	43.4		21.1	108	55.2		16.4	89	35	5	03		33	5	58	0	57	63	15	54	34
17	72	43.6	-2	20.2	123	25.1		07.3	91	40	4	57	5	29	5	56	0	40	66	16	08	31
18	87	43.7	-2	19.2	137	55.1		58.1	92	45	4	50	5	25	5	54	0	20	70	16	26	27
19	102	43.9		18.2	152	25.1		48.8	93	50		41		19	52		**	**	**		48	21
20	117	44.1		17.2	166	55.1		39.4	94	52		36		17	51		**	**	**	16	58	19
21	132	44.3		16.2	181	25.2		29.8	96	54		31		14	50		**	**	**	17	09	17
22	147	44.4		15.2	195	55.4		20.1	97	56		25		11	48		**	**	**		23	12
23	162	44.6		14.2	210	25.5		10.4	97	58		19		07	47		**	**	**		38	8
24	177	44.8	-2	13.2	224	55.7		00.5	99	60 S	4	11	5	03	5	45	**	**	**	17	56	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 31.4 ^m		Mag: -3.9 PMG: 13 ^h 10 ^m		Mag: +1.2 PMG: 11 ^h 17 ^m		Mag: -2.3 PMG: 19 ^h 36 ^m		Mag: +1.0 PMG: 12 ^h 47 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	171	37.8	162	35.0	+2	43.8	190	37.9	-9	12.5	65	11.8	+22	56.3	167	45.1	-0	38.1
1	186	40.2	177	34.6		45.1	205	38.5		11.8	80	14.3		56.3	182	47.3		38.0
2	201	42.7	192	34.3		46.4	220	39.2		11.0	95	16.7		56.3	197	49.5		37.9
3	216	45.1	207	33.9		47.6	235	39.8		10.3	110	19.1		56.3	212	51.7		37.7
4	231	47.6	222	33.5		48.9	250	40.4		09.6	125	21.6		56.3	227	53.9		37.6
5	246	50.1	237	33.2	+2	50.2	265	41.0	-9	08.8	140	24.0	+22	56.3	242	56.0	-0	37.5
6	261	52.5	252	32.8	+2	51.5	280	41.6	-9	08.1	155	26.5	+22	56.3	257	58.2	-0	37.4
7	276	55.0	267	32.4		52.8	295	42.3		07.3	170	28.9		56.3	273	00.4		37.2
8	291	57.5	282	32.1		54.1	310	42.9		06.6	185	31.3		56.3	288	02.6		37.1
9	306	59.9	297	31.7		55.3	325	43.5		05.8	200	33.8		56.3	303	04.8		37.0
10	322	02.4	312	31.4		56.6	340	44.1		05.1	215	36.2		56.3	318	06.9		36.9
11	337	04.9	327	31.0	+2	57.9	355	44.7	-9	04.3	230	38.6	+22	56.3	333	09.1	-0	36.7
12	352	07.3	342	30.6	+2	59.2	10	45.4	-9	03.6	245	41.1	+22	56.3	348	11.3	-0	36.6
13	7	09.8	357	30.3	+3	00.5	25	46.0		02.9	260	43.5		56.3	3	13.5		36.5
14	22	12.2	12	29.9		01.7	40	46.6		02.1	275	45.9		56.3	18	15.7		36.4
15	37	14.7	27	29.5		03.0	55	47.2		01.4	290	48.4		56.3	33	17.8		36.3
16	52	17.2	42	29.2		04.3	70	47.8	-9	00.6	305	50.8		56.3	48	20.0		36.1
17	67	19.6	57	28.8	+3	05.6	85	48.5	-8	59.9	320	53.2	+22	56.3	63	22.2	-0	36.0
18	82	22.1	72	28.4	+3	06.9	100	49.1	-8	59.1	335	55.7	+22	56.3	78	24.4	-0	35.9
19	97	24.6	87	28.1		08.2	115	49.7		58.4	350	58.1		56.3	93	26.6		35.8
20	112	27.0	102	27.7		09.4	130	50.3		57.6	6	00.5		56.3	108	28.7		35.6
21	127	29.5	117	27.3		10.7	145	50.9		56.9	21	03.0		56.3	123	30.9		35.5
22	142	32.0	132	27.0		12.0	160	51.6		56.1	36	05.4		56.3	138	33.1		35.4
23	157	34.4	147	26.6		13.3	175	52.2		55.4	51	07.8		56.3	153	35.3		35.3
24	172	36.9	162	26.2	+3	14.6	190	52.8	-8	54.6	66	10.3	+22	56.3	168	37.5	-0	35.1
Dif	—		-4		+13		+6		+7		+24		0		+22		+	

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG:12 ^h 08.9 ^m				Edad: 25.5 ^d PHE { 4 ^h : 56/0 12 ^h : 56/2 20 ^h : 56/4 SD: 15/2 PMG: 9 ^h 19 ^m R°: 49 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°		
h	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m m	h m m	h m m			
0	177 44.8	-2 13.2	224 55.7	-22 00.5	101	60 N	18 02	18 44	19 33	6 00 2	12 51 99					
1	192 45.0	12.3	239 26.0	-21 50.4	101	58	03	42	28	5 45 7	13 05 94					
2	207 45.1	11.3	253 56.3	40.3	101	56	03	40	24	32 11	18 89					
3	222 45.3	10.3	268 26.6	30.0	103	54	04	39	21	20 15	28 86					
4	237 45.5	09.3	282 57.0	19.7	103	52	04	38	18	10 18	38 83					
5	252 45.6	-2 08.3	297 27.4	-21 09.2	105	50	18 05	18 37	19 15	5 01 20	13 46 80					
6	267 45.8	-2 07.3	311 57.9	-20 58.6	106	45	18 06	18 35	19 09	4 42 26	14 04 75					
7	282 46.0	06.3	326 28.4	47.9	107	40	07	34	05	26 30	19 70					
8	297 46.2	05.3	340 58.9	37.1	108	35	07	33	02	13 33	31 66					
9	312 46.3	04.4	355 29.5	26.2	109	30	08	32	19 00	4 01 36	14 42 63					
10	327 46.5	03.4	10 00.1	15.2	110	20	10	32	18 57	3 41 41	15 00 58					
11	342 46.7	-2 02.4	24 30.7	-20 04.0	112	10 N	18 11	18 32	18 56	3 23 46	15 16 53					
12	357 46.9	-2 01.4	39 01.4	-19 52.8	112	0	18 12	18 33	18 57	3 07 50	15 30 49					
13	12 47.0	-2 00.4	53 32.2	41.4	114	10 S	14	35	18 59	2 50 54	15 45 44					
14	27 47.2	-1 59.4	68 02.9	30.0	114	20	15	37	19 03	33 58	16 00 40					
15	42 47.4	58.4	82 33.7	18.4	116	30	17	41	09	12 63	18 35					
16	57 47.6	57.4	97 04.6	-19 06.7	117	35	18	44	13	2 00 66	28 32					
17	72 47.7	-1 56.4	111 35.5	-18 55.0	117	40	18 20	18 47	19 18	1 46 70	16 39 29					
18	87 47.9	-1 55.5	126 06.4	-18 43.1	119	45	18 21	18 51	19 25	1 30 74	16 53 24					
19	102 48.1	54.5	140 37.4	31.1	120	50	23	56	34	09 80	17 09 19					
20	117 48.3	53.5	155 08.4	19.0	121	52	24	18 58	38	1 00 82	17 16					
21	132 48.5	52.5	169 39.4	-18 06.9	121	54	25	19 01	43	0 49 85	26 13					
22	147 48.6	51.5	184 10.5	-17 54.6	123	56	26	03	48	36 89	35 10					
23	162 48.8	50.5	198 41.6	42.2	124	58	27	07	19 55	22 93	46 6					
24	177 49.0	-1 49.5	213 12.7	-17 29.7	125	60 S	18 29	19 11	20 02	0 04 100	17 58 2					

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 12 ^h 27.5 ^m		Mag: -3.9 PMG: 13 ^h 11 ^m		Mag: +1.2 PMG: 11 ^h 16 ^m		Mag: -2.3 PMG: 19 ^h 32 ^m		Mag: +0.9 PMG: 12 ^h 44 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	172 36.9	162 26.2	+3 14.6	190 52.8	-8 54.6	66 10.3	+22 56.3	168 37.5	-0 35.1	
1	187 39.4	177 25.9	15.8	205 53.4	53.9	81 12.7	56.3	183 39.6	35.0	
2	202 41.8	192 25.5	17.1	220 54.0	53.2	96 15.1	56.3	198 41.8	34.9	
3	217 44.3	207 25.1	18.4	235 54.7	52.4	111 17.5	56.3	213 44.0	34.8	
4	232 46.7	222 24.8	19.7	250 55.3	51.7	126 20.0	56.3	228 46.2	34.7	
5	247 49.2	237 24.4	+3 21.0	265 55.9	-8 50.9	141 22.4	+22 56.3	243 48.4	-0 34.5	
6	262 51.7	252 24.0	+3 22.2	280 56.5	-8 50.2	156 24.8	+22 56.3	258 50.5	-0 34.4	
7	277 54.1	267 23.7	23.5	295 57.2	49.4	171 27.3	56.3	273 52.7	34.3	
8	292 56.6	282 23.3	24.8	310 57.8	48.7	186 29.7	56.3	288 54.9	34.2	
9	307 59.1	297 22.9	26.1	325 58.4	47.9	201 32.1	56.3	303 57.1	34.0	
10	323 01.5	312 22.6	27.4	340 59.0	47.2	216 34.5	56.3	318 59.3	33.9	
11	338 04.0	327 22.2	+3 28.6	355 59.6	-8 46.4	231 37.0	+22 56.3	334 01.4	-0 33.8	
12	353 06.5	342 21.8	+3 29.9	11 00.3	-8 45.7	246 39.4	+22 56.3	349 03.6	-0 33.7	
13	8 08.9	357 21.5	31.2	26 00.9	44.9	261 41.8	56.3	4 05.8	33.5	
14	23 11.4	12 21.1	32.5	41 01.5	44.2	276 44.2	56.3	19 08.0	33.4	
15	38 13.9	27 20.7	33.8	56 02.1	43.4	291 46.7	56.3	34 10.2	33.3	
16	53 16.3	42 20.4	35.0	71 02.8	42.7	306 49.1	56.3	49 12.3	33.2	
17	68 18.8	57 20.0	+3 36.3	86 03.4	-8 41.9	321 51.5	+22 56.3	64 14.5	-0 33.1	
18	83 21.2	72 19.6	+3 37.6	101 04.0	-8 41.2	336 53.9	+22 56.2	79 16.7	-0 32.9	
19	98 23.7	87 19.3	38.9	116 04.6	40.4	351 56.4	56.2	94 18.9	32.8	
20	113 26.2	102 18.9	40.2	131 05.3	39.7	6 58.8	56.2	109 21.1	32.7	
21	128 28.6	117 18.5	41.4	146 05.9	38.9	22 01.2	56.2	124 23.2	32.6	
22	143 31.1	132 18.2	42.7	161 06.5	38.2	37 03.6	56.2	139 25.4	32.4	
23	158 33.6	147 17.8	44.0	176 07.1	37.4	52 06.1	56.2	154 27.6	32.3	
24	173 36.0	162 17.4	+3 45.3	191 07.8	-8 36.7	67 08.5	+22 56.2	169 29.8	-0 32.2	
Dif	—	-4	+13	+6	+7	+24	0	+22	+	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 08.6 ^m			Edad: 26.5 ^d SD: 15 ^h 4 PMG: 10 ^h 06 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	177	49.0	-1	49.5	213	12.7	-17	29.7	60 N	4	43	5	33	6	14	0
1	192	49.2		48.5	227	43.9		17.2	58	48	34	13	5	51	4	38
2	207	49.3		47.6	242	15.1		04.5	56	52	36	13	42	7	46	88
3	222	49.5		46.6	256	46.3		51.8	54	56	37	12	34	10	53	85
4	237	49.7		45.6	271	17.6		38.9	52	4	59	39	12	27	13	14
5	252	49.9	-1	44.6	285	48.9	-16	26.0	50	5	02	5	40	6	12	5
6	267	50.0	-1	43.6	300	20.3	-16	12.9	45	5	07	5	42	6	11	5
7	282	50.2		42.6	314	51.7	-15	59.8	40	12	43	10	4	55	25	27
8	297	50.4		41.6	329	23.1		46.6	35	15	44	09	45	29	36	65
9	312	50.6		40.6	343	54.5		33.3	30	17	45	09	36	32	43	62
10	327	50.7		39.6	358	26.0		19.9	20	20	46	08	21	38	15	56
11	342	50.9	-1	38.7	12	57.5	-15	06.4	10 N	5	21	5	46	6	06	4
12	357	51.1	-1	37.7	27	29.0	-14	52.9	0	5	21	5	45	6	05	3
13	12	51.3		36.7	42	00.6		39.2	10 S	19	43	04	43	51	28	42
14	27	51.5		35.7	56	32.2		25.5	20	15	41	03	29	56	39	37
15	42	51.6		34.7	71	03.8	-14	11.7	30	09	37	01	14	61	51	31
16	57	51.8		33.7	85	35.4	-13	57.8	35	05	34	6	00	3	05	65
17	72	52.0	-1	32.7	100	07.1	-13	43.8	40	5	00	5	59	2	54	69
18	87	52.2	-1	31.7	114	38.8	-13	29.7	45	4	53	5	57	2	42	74
19	102	52.3		30.7	129	10.5		15.6	50	44	23	55	27	79	27	15
20	117	52.5		29.8	143	42.2	-13	01.4	52	40	20	54	20	82	32	12
21	132	52.7		28.8	158	14.0	-12	47.1	54	35	18	53	13	84	37	10
22	147	52.9		27.8	172	45.8		32.7	56	30	15	52	2	04	88	44
23	162	53.1		26.8	187	17.6		18.3	58	24	12	51	1	54	92	51
24	177	53.2	-1	25.8	201	49.4	-12	03.8	60 S	4	17	5	08	5	50	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 23.6 ^m		Mag: -3.9 PMG: 13 ^h 11 ^m		Mag: +1.2 PMG: 11 ^h 15 ^m		Mag: -2.3 PMG: 19 ^h 28 ^m		Mag: +0.9 PMG: 12 ^h 40 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	173	36.0	162	17.4	+3	45.3	191	07.8	-8	36.7
1	188	38.5	177	17.1		46.5	206	08.4		35.9
2	203	41.0	192	16.7		47.8	221	09.0		35.2
3	218	43.4	207	16.3		49.1	236	09.6		34.4
4	233	45.9	222	16.0		50.4	251	10.3		33.7
5	248	48.3	237	15.6	+3	51.7	266	10.9	-8	32.9
6	263	50.8	252	15.2	+3	52.9	281	11.5	-8	32.2
7	278	53.3	267	14.9		54.2	296	12.1		31.4
8	293	55.7	282	14.5		55.5	311	12.8		30.7
9	308	58.2	297	14.1		56.8	326	13.4		29.9
10	324	00.7	312	13.8		58.0	341	14.0		29.2
11	339	03.1	327	13.4	+3	59.3	356	14.6	-8	28.4
12	354	05.6	342	13.0	+4	00.6	11	15.3	-8	27.7
13	9	08.1	357	12.7		01.9	26	15.9		26.9
14	24	10.5	12	12.3		03.1	41	16.5		26.2
15	39	13.0	27	11.9		04.4	56	17.1		25.4
16	54	15.5	42	11.6		05.7	71	17.8		24.7
17	69	17.9	57	11.2	+4	07.0	86	18.4	-8	23.9
18	84	20.4	72	10.8	+4	08.2	101	19.0	-8	23.2
19	99	22.8	87	10.5		09.5	116	19.6		22.4
20	114	25.3	102	10.1		10.8	131	20.3		21.7
21	129	27.8	117	09.7		12.1	146	20.9		20.9
22	144	30.2	132	09.3		13.3	161	21.5		20.2
23	159	32.7	147	09.0		14.6	176	22.2		19.4
24	174	35.2	162	08.6	+4	15.9	191	22.8	-8	18.7
Dif	—		-4		+13		+6		+8	
									+24	0
									+22	+

UT	SOL			● LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16 ^h 1 PMG: 12 ^h 08.3 ^m			Edad: 27.5 ^d PHE { 4 ^h : 57/4 12 ^h : 57/7 20 ^h : 57/9 R°: 48 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	R°	Hora	R°		
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	h m	m	h m	m				
0	177 53.2	-1 25.8	201 49.4	129	-12 03.8	146	60 N	18 07	18 49	19 38	6 01	0	16 05	98						
1	192 53.4	24.8	216 21.3	128	-11 49.2	147	58	07	46	33	5 55	4	10 94							
2	207 53.6	23.8	230 53.1	129	34.5	147	56	07	45	28	49	8	14 90							
3	222 53.8	22.8	245 25.0	129	19.8	148	54	08	43	25	44	11	18 87							
4	237 53.9	21.8	259 56.9	129	-11 05.0	148	52	08	42	21	40	13	21 84							
5	252 54.1	-1 20.9	274 28.8	129	-10 50.1	149	50	18 08	18 40	19 18	5 36	16	16 24	82						
6	267 54.3	-1 19.9	289 00.8	130	-10 35.2	149	45	18 08	18 38	19 12	5 27	21	16 31	76						
7	282 54.5	18.9	303 32.7	129	20.2	150	40	09	36	07	20	25	36 72							
8	297 54.7	17.9	318 04.7	130	-10 05.1	151	35	09	34	04	14	29	41 67							
9	312 54.8	16.9	332 36.6	129	-9 50.0	151	30	09	33	19 01	5 08	32	45 64							
10	327 55.0	15.9	347 08.6	130	34.8	152	20	10	32	18 58	4 59	37	52 58							
11	342 55.2	-1 14.9	1 40.6	130	-9 19.6	152	10 N	18 11	18 32	18 56	4 50	43	16 58	53						
12	357 55.4	-1 13.9	16 12.6	130	-9 04.3	153	0	18 12	18 32	18 56	4 42	48	17 04	48						
13	12 55.6	12.9	30 44.7	131	-8 48.9	154	10 S	12	33	18 58	34	52	10 42							
14	27 55.7	12.0	45 16.7	130	33.5	154	20	13	35	19 01	25	58	16 37							
15	42 55.9	11.0	59 48.7	130	18.0	155	30	15	39	06	15	64	22 32							
16	57 56.1	10.0	74 20.8	131	-8 02.4	156	35	15	41	10	10	67	26 29							
17	72 56.3	-1 09.0	88 52.8	130	-7 46.8	156	40	18 16	18 43	19 15	4 03	71	17 31	24						
18	87 56.4	-1 08.0	103 24.9	131	-7 31.2	156	45	18 17	18 47	19 21	3 56	75	17 36	20						
19	102 56.6	07.0	117 56.9	130	-7 15.5	157	50	19	51	29	46	81	42 15							
20	117 56.8	06.0	132 29.0	131	-6 59.7	158	52	19	53	33	42	84	44 13							
21	132 57.0	05.0	147 01.0	130	43.9	158	54	20	55	38	37	87	47 10							
22	147 57.2	04.0	161 33.1	131	28.1	158	56	21	18 58	43	32	90	50 8							
23	162 57.3	03.1	176 05.2	131	-6 12.2	159	58	22	19 01	48	26	94	54 4							
24	177 57.5	-1 02.1	190 37.2	130	-5 56.3	159	60 S	18 23	19 04	19 55	3 19	98	17 58	1						

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 12 ^h 19.6 ^m		Mag: -3.9 PMG: 13 ^h 12 ^m		Mag: +1.2 PMG: 11 ^h 14 ^m		Mag: -2.3 PMG: 19 ^h 24 ^m		Mag: +0.9 PMG: 12 ^h 37 ^m	
	hG ♈	hG ♀	Dec		hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	174 35.2	162 08.6	+4 15.9	191 22.8	-8 18.7	68 06.5	+22 56.2	170 22.1	-0 29.2	
1	189 37.6	177 08.2	17.2	206 23.4	17.9	83 08.9	56.2	185 24.3	29.1	
2	204 40.1	192 07.9	18.4	221 24.0	17.1	98 11.3	56.2	200 26.5	29.0	
3	219 42.6	207 07.5	19.7	236 24.7	16.4	113 13.7	56.2	215 28.6	28.9	
4	234 45.0	222 07.1	21.0	251 25.3	15.6	128 16.1	56.2	230 30.8	28.7	
5	249 47.5	237 06.8	+4 22.3	266 25.9	-8 14.9	143 18.5	+22 56.2	245 33.0	-0 28.6	
6	264 50.0	252 06.4	+4 23.5	281 26.6	-8 14.1	158 20.9	+22 56.1	260 35.2	-0 28.5	
7	279 52.4	267 06.0	24.8	296 27.2	13.4	173 23.4	56.1	275 37.3	28.4	
8	294 54.9	282 05.6	26.1	311 27.8	12.6	188 25.8	56.1	290 39.5	28.2	
9	309 57.3	297 05.3	27.4	326 28.4	11.9	203 28.2	56.1	305 41.7	28.1	
10	324 59.8	312 04.9	28.6	341 29.1	11.1	218 30.6	56.1	320 43.9	28.0	
11	340 02.3	327 04.5	+4 29.9	356 29.7	-8 10.4	233 33.0	+22 56.1	335 46.1	-0 27.9	
12	355 04.7	342 04.2	+4 31.2	11 30.3	-8 09.6	248 35.4	+22 56.1	350 48.2	-0 27.7	
13	10 07.2	357 03.8	32.5	26 31.0	08.9	263 37.8	56.1	5 50.4	27.6	
14	25 09.7	12 03.4	33.7	41 31.6	08.1	278 40.2	56.1	20 52.6	27.5	
15	40 12.1	27 03.0	35.0	56 32.2	07.3	293 42.6	56.1	35 54.8	27.4	
16	55 14.6	42 02.7	36.3	71 32.9	06.6	308 45.0	56.1	50 57.0	27.3	
17	70 17.1	57 02.3	+4 37.5	86 33.5	-8 05.8	323 47.4	+22 56.1	65 59.1	-0 27.1	
18	85 19.5	72 01.9	+4 38.8	101 34.1	-8 05.1	338 49.8	+22 56.1	81 01.3	-0 27.0	
19	100 22.0	87 01.6	40.1	116 34.7	04.3	353 52.3	56.1	96 03.5	26.9	
20	115 24.4	102 01.2	41.4	131 35.4	03.6	8 54.7	56.1	111 05.7	26.8	
21	130 26.9	117 00.8	42.6	146 36.0	02.8	23 57.1	56.1	126 07.9	26.6	
22	145 29.4	132 00.4	43.9	161 36.6	02.1	38 59.5	56.1	141 10.0	26.5	
23	160 31.8	147 00.1	45.2	176 37.3	01.3	54 01.9	56.1	156 12.2	26.4	
24	175 34.3	161 59.7	+4 46.4	191 37.9	-8 00.5	69 04.3	+22 56.1	171 14.4	-0 26.3	
Dif	—	-4	+13	+6	+8	+24	0	+22	+	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 16 ^h 1 PMG:12 ^h 08.0 ^m			Edad: 28.5 ^d PHE { 4 ^h : 58'2 12 ^h : 58'4 20 ^h : 58'6 SD: 15'8 PMG: 11 ^h 39 ^m R°: 47 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m		
0	177	57.5	-1	02.1	190	37.2	131	-5	56.3	160	60 N	4 37	5 26	6 08	6 00	**	17	42	98		
1	192	57.7		01.1	205	09.3	130		40.3	160	58	42	29	08	5 58	2		42	95		
2	207	57.9	-1	00.1	219	41.3	130		24.3	160	56	47	31	08	55	6		43	91		
3	222	58.1	-0	59.1	234	13.4	131	-5	08.2	161	54	51	32	08	54	8		43	88		
4	237	58.2		58.1	248	45.4	130	-4	52.1	161	52	54	34	07	52	11		44	85		
5	252	58.4	-0	57.1	263	17.5	131	-4	35.9	162	50	4 57	5 35	6 07	5 50	14	17	44	82		
6	267	58.6	-0	56.1	277	49.5	130	-4	19.7	162	45	5 04	5 38	6 07	5 47	19	17	45	77		
7	282	58.8		55.1	292	21.5	130	-4	03.5	162	40	08	40	07	44	23		46	72		
8	297	59.0		54.2	306	53.5	130	-3	47.3	162	35	12	41	07	41	27		47	67		
9	312	59.2		53.2	321	25.5	130		31.0	163	30	15	43	06	39	30		48	63		
10	327	59.3		52.2	335	57.5	130	-3	14.7	163	20	18	44	06	35	36		49	57		
11	342	59.5	-0	51.2	350	29.5	130	-2	58.3	164	10 N	5 20	5 44	6 05	5 32	41	17	49	53		
12	357	59.7	-0	50.2	5	01.4	129	-2	41.9	164	0	5 20	5 44	6 05	5 28	47	17	50	47		
13	12	59.9		49.2	19	33.4	130		25.5	164	10 S	19	43	04	25	52		51	42		
14	28	00.1		48.2	34	05.3	129	-2	09.1	164	20	16	41	03	22	56		52	37		
15	43	00.2		47.2	48	37.2	129	-1	52.6	165	30	10	38	02	18	63		53	31		
16	58	00.4		46.2	63	09.1	129		36.1	165	35	07	36	01	15	67		53	28		
17	73	00.6	-0	45.3	77	41.0	129	-1	19.6	165	40	5 02	5 34	6 01	5 13	70	17	54	23		
18	88	00.8	-0	44.3	92	12.8	128	-1	03.1	165	45	4 56	5 30	6 00	5 10	75	17	54	20		
19	103	01.0		43.3	106	44.7	129	-0	46.5	166	50	48	26	5 58	06	81		55	14		
20	118	01.1		42.3	121	16.5	128		30.0	165	52	44	24	58	04	84		56	11		
21	133	01.3		41.3	135	48.2	127	-0	13.4	166	54	40	22	57	03	86		56	9		
22	148	01.5		40.3	150	20.0	128	+0	03.2	166	56	35	19	57	5 00	90		56	6		
23	163	01.7		39.3	164	51.7	127		19.9	167	58	29	16	56	4 58	93		57	3		
24	178	01.9	-0	38.3	179	23.4	127	+0	36.5	166	60 S	4 22	5 13	5 55	4 56	97	17	57	**		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 12 ^h 15.7 ^m			Mag: -3.9 PMG: 13 ^h 12 ^m			Mag: +1.2 PMG: 11 ^h 13 ^m			Mag: -2.3 PMG: 19 ^h 21 ^m			Mag: +0.9 PMG: 12 ^h 33 ^m								
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	175	34.3	161	59.7	+4	46.4	191	37.9	-8	00.5	69	04.3	+22	56.1	171	14.4	-0	26.3			
1	190	36.8	176	59.3		47.7	206	38.5	-7	59.8	84	06.7		56.1	186	16.6		26.1			
2	205	39.2	191	59.0		49.0	221	39.2		59.0	99	09.1		56.1	201	18.8		26.0			
3	220	41.7	206	58.6		50.3	236	39.8		58.3	114	11.5		56.1	216	20.9		25.9			
4	235	44.2	221	58.2		51.5	251	40.4		57.5	129	13.9		56.1	231	23.1		25.8			
5	250	46.6	236	57.8	+4	52.8	266	41.1	-7	56.8	144	16.3	+22	56.1	246	25.3	-0	25.7			
6	265	49.1	251	57.5	+4	54.1	281	41.7	-7	56.0	159	18.7	+22	56.1	261	27.5	-0	25.5			
7	280	51.6	266	57.1		55.3	296	42.3		55.2	174	21.1		56.1	276	29.6		25.4			
8	295	54.0	281	56.7		56.6	311	42.9		54.5	189	23.5		56.0	291	31.8		25.3			
9	310	56.5	296	56.4		57.9	326	43.6		53.7	204	25.9		56.0	306	34.0		25.2			
10	325	58.9	311	56.0	+4	59.1	341	44.2		53.0	219	28.3		56.0	321	36.2		25.0			
11	341	01.4	326	55.6	+5	00.4	356	44.8	-7	52.2	234	30.7	+22	56.0	336	38.4	-0	24.9			
12	356	03.9	341	55.2	+5	01.7	11	45.5	-7	51.5	249	33.1	+22	56.0	351	40.5	-0	24.8			
13	11	06.3	356	54.9		02.9	26	46.1		50.7	264	35.5		56.0	6	42.7		24.7			
14	26	08.8	11	54.5		04.2	41	46.7		49.9	279	37.9		56.0	21	44.9		24.5			
15	41	11.3	26	54.1		05.5	56	47.4		49.2	294	40.3		56.0	36	47.1		24.4			
16	56	13.7	41	53.7		06.7	71	48.0		48.4	309	42.7		56.0	51	49.3		24.3			
17	71	16.2	56	53.4	+5	08.0	86	48.6	-7	47.7	324	45.1	+22	56.0	66	51.4	-0	24.2			
18	86	18.7	71	53.0	+5	09.3	101	49.3	-7	46.9	339	47.5	+22	56.0	81	53.6	-0	24.1			
19	101	21.1	86	52.6		10.5	116	49.9		46.2	354	49.9		56.0	96	55.8		23.9			
20	116	23.6	101	52.2		11.8	131	50.5		45.4	9	52.3		56.0	111	58.0		23.8			
21	131	26.0	116	51.9		13.1	146	51.2		44.6	24	54.7		56.0	127	00.1		23.7			
22	146	28.5	131	51.5		14.3	161	51.8		43.9	39	57.1		56.0	142	02.3		23.6			
23	161	31.0	146	51.1		15.6	176	52.4		43.1	54	59.5		56.0	157	04.5		23.4			
24	176	33.4	161	50.7	+5	16.9	191	53.1	-7	42.4	70	01.9	+22	56.0	172	06.7	-0	23.3			
Dif	—			-4 +13			+6 +8			+24			0			+22			+1		

UT	SOL			● LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna						
	SD: 16/1 PMG:12 ^h 07.7 ^m			Edad: 29.5 ^d SD: 16/0 PMG: 12 ^h 26 ^m						Civil			Náutico			Hora R°						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif															
h	°	/	°	/	°	/	°	/	°	h	m	h	m	h	m	m	h	m	m			
0	178	01.9	-0	38.3	179	23.4	+0	36.5	60 N	18	12	18	54	19	44	5	59	1	19	20	104	
1	193	02.1		37.3	193	55.1	+0	53.1	58	12			51		38	6	00	5		17	99	
2	208	02.2		36.4	208	26.7	+1	09.8	56	12			49		33		01	8		14	95	
3	223	02.4		35.4	222	58.3		26.4	54	11			47		29		02	11		11	92	
4	238	02.6		34.4	237	29.9		43.1	52	11			45		25		03	14		09	89	
5	253	02.8	-0	33.4	252	01.4	+1	59.8	50	18	11		18	43	19	22	6	04	16	19	06	87
6	268	03.0	-0	32.4	266	32.9	+2	16.4	45	18	11		18	40	19	15	6	06	21	19	02	80
7	283	03.1		31.4	281	04.4		33.1	40	11			38		10		07	26		18	58	75
8	298	03.3		30.4	295	35.8	+2	49.8	35	11			36		06		08	30		54	71	
9	313	03.5		29.4	310	07.2	+3	06.5	30	11			35	19	02		09	34		51	68	
10	328	03.7		28.4	324	38.6		23.1	20	11			33	18	58		11	40		46	61	
11	343	03.9	-0	27.4	339	09.9	+3	39.8	10 N	18	11		18	32	18	56	6	13	45	18	42	55
12	358	04.1	-0	26.5	353	41.2	+3	56.4	0	18	11		18	32	18	56	6	15	49	18	37	51
13	13	04.2		25.5	8	12.4	+4	13.1	10 S	11			32		57		17	54		33	46	
14	28	04.4		24.5	22	43.6		29.7	20	12			34	18	59		18	61		29	40	
15	43	04.6		23.5	37	14.7	+4	46.4	30	12			36	19	04		21	66		24	34	
16	58	04.8		22.5	51	45.8	+5	03.0	35	13			38		07		22	70		21	31	
17	73	05.0	-0	21.5	66	16.8	+5	19.6	40	18	13		18	40	19	12	6	23	74	18	17	27
18	88	05.2	-0	20.5	80	47.8	+5	36.2	45	18	14		18	43	19	17	6	25	79	18	14	22
19	103	05.3		19.5	95	18.7	+5	52.8	50	14			47		25		27	85		09	17	
20	118	05.5		18.5	109	49.6	+6	09.3	52	15			48		28		28	88		07	14	
21	133	05.7		17.6	124	20.5		25.9	54	15			50		32		29	91		05	11	
22	148	05.9		16.6	138	51.2		42.4	56	16			53		37		30	94		02	9	
23	163	06.1		15.6	153	22.0	+6	58.9	58	16			55		42		31	98		18	00	4
24	178	06.3	-0	14.6	167	52.6	+7	15.3	60 S	18	17		18	58	19	48	6	33	102	17	56	1
UT	ARIES PMG 12 ^h 11.8 ^m			VENUS Mag: -3.9 PMG: 13 ^h 13 ^m			MARTE Mag: +1.2 PMG: 11 ^h 12 ^m			JÚPITER Mag: -2.3 PMG: 19 ^h 17 ^m			SATURNO Mag: +0.9 PMG: 12 ^h 30 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec											
h	°	/	°	/	°	/	°	/	°	/	°	/	°	/	°	/	°	/	°	/	°	/
0	176	33.4	161	50.7	+5	16.9	191	53.1	-7	42.4	70	01.9	+22	56.0	172	06.7	-0	23.3				
1	191	35.9	176	50.4		18.1	206	53.7		41.6	85	04.3		56.0	187	08.9		23.2				
2	206	38.4	191	50.0		19.4	221	54.3		40.8	100	06.7		56.0	202	11.0		23.1				
3	221	40.8	206	49.6		20.7	236	55.0		40.1	115	09.1		56.0	217	13.2		22.9				
4	236	43.3	221	49.2		21.9	251	55.6		39.3	130	11.4		55.9	232	15.4		22.8				
5	251	45.8	236	48.9	+5	23.2	266	56.2	-7	38.6	145	13.8	+22	55.9	247	17.6	-0	22.7				
6	266	48.2	251	48.5	+5	24.5	281	56.9	-7	37.8	160	16.2	+22	55.9	262	19.8	-0	22.6				
7	281	50.7	266	48.1		25.7	296	57.5		37.1	175	18.6		55.9	277	21.9		22.4				
8	296	53.2	281	47.7		27.0	311	58.2		36.3	190	21.0		55.9	292	24.1		22.3				
9	311	55.6	296	47.4		28.3	326	58.8		35.5	205	23.4		55.9	307	26.3		22.2				
10	326	58.1	311	47.0		29.5	341	59.4		34.8	220	25.8		55.9	322	28.5		22.1				
11	342	00.5	326	46.6	+5	30.8	357	00.1	-7	34.0	235	28.2	+22	55.9	337	30.6	-0	22.0				
12	357	03.0	341	46.2	+5	32.1	12	00.7	-7	33.3	250	30.6	+22	55.9	352	32.8	-0	21.8				
13	12	05.5	356	45.9		33.3	27	01.3		32.5	265	33.0		55.9	7	35.0		21.7				
14	27	07.9	11	45.5		34.6	42	02.0		31.7	280	35.4		55.9	22	37.2		21.6				
15	42	10.4	26	45.1		35.9	57	02.6		31.0	295	37.8		55.9	37	39.4		21.5				
16	57	12.9	41	44.7		37.1	72	03.2		30.2	310	40.1		55.9	52	41.5		21.3				
17	72	15.3	56	44.3	+5	38.4	87	03.9	-7	29.5	325	42.5	+22	55.9	67	43.7	-0	21.2				
18	87	17.8	71	44.0	+5	39.6	102	04.5	-7	28.7	340	44.9	+22	55.9	82	45.9	-0	21.1				
19	102	20.3	86	43.6		40.9	117	05.1		27.9	355	47.3		55.9	97	48.1		21.0				
20	117	22.7	101	43.2		42.2	132	05.8		27.2	10	49.7		55.9	112	50.2		20.8				
21	132	25.2	116	42.8		43.4	147	06.4		26.4	25	52.1		55.9	127	52.4		20.7				
22	147	27.6	131	42.5		44.7	162	07.1		25.6	40	54.5		55.8	142	54.6		20.6				
23	162	30.1	146	42.1		45.9	177	07.7		24.9	55	56.9		55.8	157	56.8		20.5				
24	177	32.6	161	41.7	+5	47.2	192	08.3	-7	24.1	70	59.3	+22	55.8	172	59.0	-0	20.4				
Dif	—		-4		+13		+6		+8		+24		0		+22			+				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 16'1 PMG:12 ^h 07.4 ^m			Edad: 0.9 ^d SD: 16'1 PMG: 13 ^h 15 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°							
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m						
0	178	06.3	-0	14.6	167	52.6	+7	15.3	60 N	4	31	5	20	6	02	5	59	0	21	03	108	
1	193	06.4		13.6	182	23.2		31.8	58		36		23	02		6	04		4	20	55	103
2	208	06.6		12.6	196	53.8	+7	48.2	56		41		25	02		08		8		48	98	
3	223	06.8		11.6	211	24.3	+8	04.5	54		46		27	03		12		11		42	90	
4	238	07.0		10.6	225	54.7		20.9	52		49		29	03		15		15		36	90	
5	253	07.2	-0	09.6	240	25.1	+8	37.2	50	4	53	5	31	6	03	6	19	17	20	31	88	
6	268	07.4	-0	08.7	254	55.4	+8	53.5	45	5	00	5	34	6	03	6	26	22	20	20	82	
7	283	07.5		07.7	269	25.6	+9	09.7	40		05		37	04		31		28		12	76	
8	298	07.7		06.7	283	55.8		25.9	35		09		39	04		37		31		20	04	72
9	313	07.9		05.7	298	25.9		42.0	30		12		40	04		41		35		19	57	69
10	328	08.1		04.7	312	56.0	+9	58.2	20		17		42	04		49		41		46	63	
11	343	08.3	-0	03.7	327	25.9	+10	14.2	10 N	5	19	5	43	6	04	6	56	46	19	36	57	
12	358	08.5	-0	02.7	341	55.8	+10	30.2	0	5	20	5	44	6	04	7	03	51	19	27	52	
13	13	08.6		01.7	356	25.7	+10	46.2	10 S		19		43	04		10		56		18	47	
14	28	08.8	-0	00.8	10	55.4	+11	02.1	20		16		42	04		17		61		19	08	42
15	43	09.0	+0	00.2	25	25.1		18.0	30		12		39	03		26		67		18	57	36
16	58	09.2		01.2	39	54.7		33.8	35		08		38	03		30		71		50	34	
17	73	09.4	+0	02.2	54	24.2	+11	49.6	40	5	04	5	36	6	03	7	36	75	18	43	29	
18	88	09.6	+0	03.2	68	53.7	+12	05.3	45	4	58	5	33	6	02	7	43	80	18	35	24	
19	103	09.7		04.2	83	23.1		20.9	50		51		29	02		50		87		25	18	
20	118	09.9		05.2	97	52.4		36.5	52		48		28	01		54		90		20	16	
21	133	10.1		06.2	112	21.6	+12	52.0	54		44		26	01		7		58		93	15	13
22	148	10.3		07.2	126	50.8	+13	07.5	56		39		23	01		8		03		96	09	10
23	163	10.5		08.1	141	19.8		22.9	58		34		21	00		08		101		18	03	5
24	178	10.7	+0	09.1	155	48.8	+13	38.2	60 S	4	28	5	18	6	00	8	13	106	17	56	0	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 12 ^h 07.8 ^m		Mag: -3.9 PMG: 13 ^h 14 ^m		Mag: +1.2 PMG: 11 ^h 11 ^m		Mag: -2.3 PMG: 19 ^h 13 ^m		Mag: +0.9 PMG: 12 ^h 26 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	177	32.6	161	41.7	+5	47.2	192	08.3	-7	24.1	70	59.3	+22	55.8	172	59.0	-0	20.4	
1	192	35.0	176	41.3		48.5	207	09.0		23.4	86	01.6		55.8	188	01.1		20.2	
2	207	37.5	191	40.9		49.7	222	09.6		22.6	101	04.0		55.8	203	03.3		20.1	
3	222	40.0	206	40.6		51.0	237	10.2		21.8	116	06.4		55.8	218	05.5		20.0	
4	237	42.4	221	40.2		52.3	252	10.9		21.1	131	08.8		55.8	233	07.7		19.9	
5	252	44.9	236	39.8	+5	53.5	267	11.5	-7	20.3	146	11.2	+22	55.8	248	09.9	-0	19.7	
6	267	47.4	251	39.4	+5	54.8	282	12.2	-7	19.6	161	13.6	+22	55.8	263	12.0	-0	19.6	
7	282	49.8	266	39.0		56.0	297	12.8		18.8	176	16.0		55.8	278	14.2		19.5	
8	297	52.3	281	38.7		57.3	312	13.4		18.0	191	18.3		55.8	293	16.4		19.4	
9	312	54.8	296	38.3		58.5	327	14.1		17.3	206	20.7		55.8	308	18.6		19.2	
10	327	57.2	311	37.9	+5	59.8	342	14.7		16.5	221	23.1		55.8	323	20.7		19.1	
11	342	59.7	326	37.5	+6	01.1	357	15.3	-7	15.7	236	25.5	+22	55.8	338	22.9	-0	19.0	
12	358	02.1	341	37.1	+6	02.3	12	16.0	-7	15.0	251	27.9	+22	55.8	353	25.1	-0	18.9	
13	13	04.6	356	36.8		03.6	27	16.6		14.2	266	30.3		55.8	8	27.3		18.7	
14	28	07.1	11	36.4		04.8	42	17.3		13.5	281	32.6		55.7	23	29.5		18.6	
15	43	09.5	26	36.0		06.1	57	17.9		12.7	296	35.0		55.7	38	31.6		18.5	
16	58	12.0	41	35.6		07.4	72	18.5		11.9	311	37.4		55.7	53	33.8		18.4	
17	73	14.5	56	35.2	+6	08.6	87	19.2	-7	11.2	326	39.8	+22	55.7	68	36.0	-0	18.3	
18	88	16.9	71	34.9	+6	09.9	102	19.8	-7	10.4	341	42.2	+22	55.7	83	38.2	-0	18.1	
19	103	19.4	86	34.5		11.1	117	20.5		09.6	356	44.5		55.7	98	40.3		18.0	
20	118	21.9	101	34.1		12.4	132	21.1		08.9	11	46.9		55.7	113	42.5		17.9	
21	133	24.3	116	33.7		13.6	147	21.7		08.1	26	49.3		55.7	128	44.7		17.8	
22	148	26.8	131	33.3		14.9	162	22.4		07.4	41	51.7		55.7	143	46.9		17.6	
23	163	29.2	146	33.0		16.2	177	23.0		06.6	56	54.1		55.7	158	49.1		17.5	
24	178	31.7	161	32.6	+6	17.4	192	23.7	-7	05.8	71	56.4	+22	55.7	173	51.2	-0	17.4	
Dif	—		-4	+13			+6	+8			+24	0			+22				+1

UT	SOL			● LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna			Puesta de Luna							
	SD: 16 ^h 1 PMG:12 ^h 07.1 ^m			Edad: 1.9 ^d PHE { 4 ^h : 59/6 12 ^h : 59/7 20 ^h : 59/7 Rº: 57 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	Rº	Hora	Rº							
h	° /	° /	° /	° /		° /		°	h m	h m	h m	h m	m	m	m	m								
0	178	10.7	+0	09.1	155	48.8	99	+13	38.2	152	60 N	18 17	18 59	19 49	5 59	3	22 51 116							
1	193	10.8		10.1	170	17.7		+13	53.4	152	58	16	56	43	6 08	9	38 108							
2	208	11.0		11.1	184	46.5	98	+14	08.6	151	56	16	53	37	16 13		26 102							
3	223	11.2		12.1	199	15.2	97		23.7	150	54	15	51	33	23 17		16 97							
4	238	11.4		13.1	213	43.9	97		38.7	150	52	15	49	29	30 20		22 07 94							
5	253	11.6	+0	14.1	228	12.4	95	+14	53.7	150	50	18 14	18 47	19 25	6 36	23	21 59 90							
6	268	11.8	+0	15.1	242	40.9	95	+15	08.6	149	45	18 14	18 43	19 17	6 48	29	21 42 84							
7	283	12.0		16.0	257	09.3	94		23.3	147	40	13	40	12	6 59	33	28 79							
8	298	12.1		17.0	271	37.6	93		38.0	147	35	12	38	07	7 08	37	16 76							
9	313	12.3		18.0	286	05.8	92	+15	52.7	147	30	12	36	19 04	16 41		21 06 72							
10	328	12.5		19.0	300	33.9	91	+16	07.2	145	20	11	33	18 59	30 47		20 49 66							
11	343	12.7	+0	20.0	315	02.0	91	+16	21.6	144	10 N	18 11	18 32	18 56	7 42	52	20 33 63							
12	358	12.9	+0	21.0	329	29.9	89	+16	36.0	144	0	18 10	18 31	18 55	7 54	56	20 19 58							
13	13	13.1		22.0	343	57.7	88	+16	50.3	143	10 S	10	31	55	8 06	60	20 05 54							
14	28	13.3		23.0	358	25.5	88	+17	04.4	141	20	10	32	18 57	18 66		19 50 50							
15	43	13.4		24.0	12	53.1	86		18.5	141	30	10	34	19 02	33 71		33 44							
16	58	13.6		24.9	27	20.7	86		32.5	140	35	10	35	05	41 75		24 40							
17	73	13.8	+0	25.9	41	48.2	85	+17	46.3	138	40	18 10	18 37	19 08	8 51	79	19 12 37							
18	88	14.0	+0	26.9	56	15.5	83	+18	00.1	138	45	18 10	18 39	19 13	9 03	84	18 59 32							
19	103	14.2		27.9	70	42.8	83		13.8	137	50	10	42	20	17 90		43 27							
20	118	14.4		28.9	85	10.0	82		27.3	135	52	10	44	23	24 93		36 23							
21	133	14.6		29.9	99	37.1	81		40.8	135	54	10	45	27	31 97		28 19							
22	148	14.7		30.9	114	04.1	80	+18	54.1	133	56	10	47	31	39 102		19 15							
23	163	14.9		31.9	128	31.0	79	+19	07.3	132	58	10	50	36	49 107		18 08 11							
24	178	15.1	+0	32.8	142	57.8	78	+19	20.4	131	60 S	18 11	18 52	19 42	9 59	114	17 56 4							
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 12 ^h 03.9 ^m			Mag: -3.9 PMG: 13 ^h 14 ^m			Mag: +1.2 PMG: 11 ^h 10 ^m			Mag: -2.3 PMG: 19 ^h 09 ^m			Mag: +0.9 PMG: 12 ^h 23 ^m											
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec									
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /									
0	178	31.7	161	32.6	+6	17.4	192	23.7	-7	05.8	71	56.4	+22	55.7	173	51.2	-0	17.4						
1	193	34.2	176	32.2		18.7	207	24.3		05.1	86	58.8		55.7	188	53.4		17.3						
2	208	36.6	191	31.8		19.9	222	24.9		04.3	102	01.2		55.7	203	55.6		17.1						
3	223	39.1	206	31.4		21.2	237	25.6		03.5	117	03.6		55.7	218	57.8		17.0						
4	238	41.6	221	31.0		22.4	252	26.2		02.8	132	05.9		55.6	233	59.9		16.9						
5	253	44.0	236	30.7	+6	23.7	267	26.9	-7	02.0	147	08.3	+22	55.6	249	02.1	-0	16.8						
6	268	46.5	251	30.3	+6	24.9	282	27.5	-7	01.2	162	10.7	+22	55.6	264	04.3	-0	16.7						
7	283	49.0	266	29.9		26.2	297	28.1	-7	00.5	177	13.1		55.6	279	06.5		16.5						
8	298	51.4	281	29.5		27.4	312	28.8	-6	59.7	192	15.4		55.6	294	08.7		16.4						
9	313	53.9	296	29.1		28.7	327	29.4		58.9	207	17.8		55.6	309	10.8		16.3						
10	328	56.4	311	28.7		30.0	342	30.1		58.2	222	20.2		55.6	324	13.0		16.2						
11	343	58.8	326	28.4	+6	31.2	357	30.7	-6	57.4	237	22.6	+22	55.6	339	15.2	-0	16.0						
12	359	01.3	341	28.0	+6	32.5	12	31.4	-6	56.7	252	24.9	+22	55.6	354	17.4	-0	15.9						
13	14	03.7	356	27.6		33.7	27	32.0		55.9	267	27.3		55.6	9	19.5		15.8						
14	29	06.2	11	27.2		35.0	42	32.6		55.1	282	29.7		55.6	24	21.7		15.7						
15	44	08.7	26	26.8		36.2	57	33.3		54.4	297	32.1		55.6	39	23.9		15.5						
16	59	11.1	41	26.4		37.5	72	33.9		53.6	312	34.4		55.6	54	26.1		15.4						
17	74	13.6	56	26.1	+6	38.7	87	34.6	-6	52.8	327	36.8	+22	55.5	69	28.3	-0	15.3						
18	89	16.1	71	25.7	+6	40.0	102	35.2	-6	52.1	342	39.2	+22	55.5	84	30.4	-0	15.2						
19	104	18.5	86	25.3		41.2	117	35.8		51.3	357	41.6		55.5	99	32.6		15.1						
20	119	21.0	101	24.9		42.5	132	36.5		50.5	12	43.9		55.5	114	34.8		14.9						
21	134	23.5	116	24.5		43.7	147	37.1		49.8	27	46.3		55.5	129	37.0		14.8						
22	149	25.9	131	24.1		45.0	162	37.8		49.0	42	48.7		55.5	144	39.1		14.7						
23	164	28.4	146	23.7		46.2	177	38.4		48.2	57	51.0		55.5	159	41.3		14.6						
24	179	30.9	161	23.3	+6	47.5	192	39.1	-6	47.5	72	53.4	+22	55.5	174	43.5	-0	14.4						
Dif	—			-4			+13			+8			+24			0			+22			+1		

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'1 PMG:12 ^h 06.8 ^m			Edad: 2.9 ^d PHE { 4 ^h : 59'8 12 ^h : 59'8 20 ^h : 59'8 PMG: 15 ^h 02 ^m R°: 60 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil		Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m				
0	178	15.1	+0	32.8	142	57.8	77	+19	20.4	60 N	4	24	5	14	5	56	6	01	5	**	**	**
1	193	15.3		33.8	157	24.5	76		33.4	58	30	17		56		15	13		**	**	**	
2	208	15.5		34.8	171	51.1	75		46.3	56	36	20		57		28	18		**	**	**	
3	223	15.7		35.8	186	17.6	74	+19	59.1	54	40	22		58		39	23		23	52	91	
4	238	15.9		36.8	200	44.0	74	+20	11.7	52	45	25		58		48	27		39	88		
5	253	16.0	+0	37.8	215	10.4	74	+20	24.2	50	4	48	5	26	5	59	6	57	30	23	28	85
6	268	16.2	+0	38.8	229	36.6	72	+20	36.6	45	4	56	5	30	6	00	7	16	35	23	05	79
7	283	16.4		39.8	244	02.7	71	+20	48.9	40	5	02		33	00		31	40		22	46	76
8	298	16.6		40.7	258	28.7	70	+21	01.0	35	06			36	01		44	43		30	74	
9	313	16.8		41.7	272	54.6	69		13.0	30	10			38	02		7	55	47	22	17	71
10	328	17.0		42.7	287	20.5	69		24.9	20	15			40	02		8	15	51	21	54	67
11	343	17.2	+0	43.7	301	46.2	67	+21	36.6	10 N	5	18	5	42	6	03	8	32	55	21	34	64
12	358	17.3	+0	44.7	316	11.8	66	+21	48.3	0	5	19	5	43	6	04	8	49	58	21	16	61
13	13	17.5		45.7	330	37.4	66	+21	59.7	10 S	19			43	04		9	05	62	20	58	57
14	28	17.7		46.7	345	02.8	64	+22	11.0	20	17			42	04		23	66		38	54	
15	43	17.9		47.6	359	28.2	64		22.2	30	13			41	05		43	71		16	50	
16	58	18.1		48.6	13	53.4	62		33.3	35	10			39	05		9	55	74	20	03	47
17	73	18.3	+0	49.6	28	18.6	62	+22	44.2	40	5	06	5	38	6	05	10	09	78	19	48	44
18	88	18.5	+0	50.6	42	43.7	61	+22	54.9	45	5	01	5	36	6	05	10	25	83	19	30	40
19	103	18.6		51.6	57	08.6	59	+23	05.5	50	4	55		33	05		46	88		19	08	35
20	118	18.8		52.6	71	33.5	59		16.0	52	51			31	05		10	56	91	18	58	32
21	133	19.0		53.6	85	58.3	58		26.3	54	48			30	05		11	07	95	46	28	
22	148	19.2		54.6	100	23.0	57		36.5	56	44			28	05		20	100		33	23	
23	163	19.4		55.5	114	47.6	56		46.5	58	39			26	05		34	107		18	17	17
24	178	19.6	+0	56.5	129	12.1	55	+23	56.3	60 S	4	33	5	23	6	05	11	52	116	17	59	7

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 00.0 ^m		Mag: -3.9 PMG: 13 ^h 15 ^m		Mag: +1.3 PMG: 11 ^h 09 ^m		Mag: -2.3 PMG: 19 ^h 05 ^m		Mag: +0.9 PMG: 12 ^h 19 ^m									
	hG ♂		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	179	30.9	161	23.3	+6	47.5	192	39.1	-6	47.5	72	53.4	+22	55.5	174	43.5	-0	14.4
1	194	33.3	176	23.0		48.7	207	39.7		46.7	87	55.8		55.5	189	45.7		14.3
2	209	35.8	191	22.6		50.0	222	40.3		45.9	102	58.1		55.5	204	47.9		14.2
3	224	38.2	206	22.2		51.2	237	41.0		45.2	118	00.5		55.5	219	50.0		14.1
4	239	40.7	221	21.8		52.5	252	41.6		44.4	133	02.9		55.5	234	52.2		13.9
5	254	43.2	236	21.4	+6	53.7	267	42.3	-6	43.6	148	05.2	+22	55.5	249	54.4	-0	13.8
6	269	45.6	251	21.0	+6	55.0	282	42.9	-6	42.9	163	07.6	+22	55.4	264	56.6	-0	13.7
7	284	48.1	266	20.6		56.2	297	43.6		42.1	178	10.0		55.4	279	58.7		13.6
8	299	50.6	281	20.3		57.5	312	44.2		41.3	193	12.3		55.4	295	00.9		13.5
9	314	53.0	296	19.9	+6	58.7	327	44.9		40.6	208	14.7		55.4	310	03.1		13.3
10	329	55.5	311	19.5	+7	00.0	342	45.5		39.8	223	17.1		55.4	325	05.3		13.2
11	344	58.0	326	19.1	+7	01.2	357	46.1	-6	39.0	238	19.4	+22	55.4	340	07.5	-0	13.1
12	0	00.4	341	18.7	+7	02.4	12	46.8	-6	38.3	253	21.8	+22	55.4	355	09.6	-0	13.0
13	15	02.9	356	18.3		03.7	27	47.4		37.5	268	24.2		55.4	10	11.8		12.8
14	30	05.3	11	17.9		04.9	42	48.1		36.7	283	26.5		55.4	25	14.0		12.7
15	45	07.8	26	17.5		06.2	57	48.7		36.0	298	28.9		55.4	40	16.2		12.6
16	60	10.3	41	17.1		07.4	72	49.4		35.2	313	31.3		55.4	55	18.3		12.5
17	75	12.7	56	16.8	+7	08.7	87	50.0	-6	34.4	328	33.6	+22	55.4	70	20.5	-0	12.3
18	90	15.2	71	16.4	+7	09.9	102	50.7	-6	33.7	343	36.0	+22	55.3	85	22.7	-0	12.2
19	105	17.7	86	16.0		11.2	117	51.3		32.9	358	38.4		55.3	100	24.9		12.1
20	120	20.1	101	15.6		12.4	132	51.9		32.1	13	40.7		55.3	115	27.1		12.0
21	135	22.6	116	15.2		13.7	147	52.6		31.4	28	43.1		55.3	130	29.2		11.9
22	150	25.1	131	14.8		14.9	162	53.2		30.6	43	45.5		55.3	145	31.4		11.7
23	165	27.5	146	14.4		16.1	177	53.9		29.8	58	47.8		55.3	160	33.6		11.6
24	180	30.0	161	14.0	+7	17.4	192	54.5	-6	29.0	73	50.2	+22	55.3	175	35.8	-0	11.5
Dif	—		-4		+12		+6		+8		+24		0		+22		+	

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG:12 ^h 06.5 ^m			Edad: 3.9 ^d SD: 16'3 PMG: 16 ^h 02 ^m			PHE { 4 ^h : 59'7 12 ^h : 59'7 20 ^h : 59'6 Rº: 64 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	Rº	Hora	Rº
h	° /	° /	° /	° /		° /		°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m	h m m	
0	178 19.6	+0 56.5	129 12.1	54	+23 56.3	97	60 N	18 22	19 04	19 55	6 06 17	0 45 114						
1	193 19.8		143 36.5	54	+24 06.0	95	58	21	19 00	48	28 27	24 104						
2	208 20.0		158 00.9	52	15.5	94	56	20	18 57	42	6 46 34	0 07 97						
3	223 20.1	+0 59.5	172 25.1	52	24.9	92	54	19	54	37	7 02 37	** ** *						
4	238 20.3	+1 00.5	186 49.3	51	34.1	90	52	18	52	32	15 41	** ** *						
5	253 20.5	+1 01.5	201 13.4	50	+24 43.1	89	50	18 18	18 50	19 28	7 27 43	** ** *						
6	268 20.7	+1 02.4	215 37.4	49	+24 52.0	87	45	18 16	18 46	19 20	7 51 48	** ** *						
7	283 20.9		230 01.3	48	+25 00.7	85	40	15	42	14	8 11 51	** ** *						
8	298 21.1		244 25.1	48	09.2	84	35	14	39	09	27 54	23 44 69						
9	313 21.3		258 48.9	47	17.6	82	30	13	37	19 05	8 42 55	28 68						
10	328 21.5		273 12.6	46	25.8	80	20	12	34	18 59	9 06 59	23 01 67						
11	343 21.6	+1 07.4	287 36.2	45	+25 33.8	79	10 N	18 11	18 32	18 56	9 27 61	22 38 66						
12	358 21.8	+1 08.4	301 59.7	44	+25 41.7	77	0	18 10	18 30	18 54	9 47 64	22 17 64						
13	13 22.0		316 23.1	44	49.4	75	10 S	09	30	54	10 07 66	21 55 63						
14	28 22.2		330 46.5	43	+25 56.9	73	20	08	30	56	29 68	32 62						
15	43 22.4		345 09.8	43	+26 04.2	71	30	07	31	18 59	10 54 71	21 06 59						
16	58 22.6		359 33.1	41	11.3	70	35	07	32	19 02	11 09 73	20 50 58						
17	73 22.8	+1 13.3	13 56.2	41	+26 18.3	68	40	18 07	18 34	19 05	11 27 74	20 32 56						
18	88 23.0	+1 14.3	28 19.3	41	+26 25.1	66	45	18 06	18 35	19 10	11 48 77	20 10 54						
19	103 23.1		42 42.4	39	31.7	64	50	06	38	16	12 14 82	19 43 51						
20	118 23.3		57 05.3	40	38.1	62	52	06	39	19	27 84	30 48						
21	133 23.5		71 28.3	38	44.3	61	54	05	40	22	12 42 87	19 14 47						
22	148 23.7		85 51.1	38	50.4	59	56	05	42	26	13 00 90	18 56 43						
23	163 23.9		100 13.9	38	+26 56.3	56	58	05	44	30	21 96	34 38						
24	178 24.1	+1 20.2	114 36.7	38	+27 01.9	56	60 S	18 05	18 46	19 35	13 48 108	18 06 26						
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 11 ^h 56.0 ^m		Mag: -3.9 PMG: 13 ^h 15 ^m		Mag: +1.3 PMG: 11 ^h 08 ^m		Mag: -2.3 PMG: 19 ^h 02 ^m		Mag: +0.9 PMG: 12 ^h 16 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♅	Dec	hG ♅	Dec	hG ♅	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	180 30.0	161 14.0	+7 17.4	192 54.5	-6 29.0	73 50.2	+22 55.3	175 35.8	-0 11.5									
1	195 32.5	176 13.6		207 55.2	28.3	88 52.5	55.3	190 37.9	11.4									
2	210 34.9	191 13.2		222 55.8	27.5	103 54.9	55.3	205 40.1	11.2									
3	225 37.4	206 12.9		237 56.5	26.7	118 57.3	55.3	220 42.3	11.1									
4	240 39.8	221 12.5		252 57.1	26.0	133 59.6	55.3	235 44.5	11.0									
5	255 42.3	236 12.1	+7 23.6	267 57.8	-6 25.2	149 02.0	+22 55.2	250 46.7	-0 10.9									
6	270 44.8	251 11.7	+7 24.8	282 58.4	-6 24.4	164 04.3	+22 55.2	265 48.8	-0 10.7									
7	285 47.2	266 11.3		297 59.1	23.7	179 06.7	55.2	280 51.0	10.6									
8	300 49.7	281 10.9		312 59.7	22.9	194 09.1	55.2	295 53.2	10.5									
9	315 52.2	296 10.5		328 00.3	22.1	209 11.4	55.2	310 55.4	10.4									
10	330 54.6	311 10.1		343 01.0	21.4	224 13.8	55.2	325 57.5	10.3									
11	345 57.1	326 09.7	+7 31.0	358 01.6	-6 20.6	239 16.1	+22 55.2	340 59.7	-0 10.1									
12	0 59.6	341 09.3	+7 32.3	13 02.3	-6 19.8	254 18.5	+22 55.2	356 01.9	-0 10.0									
13	16 02.0	356 08.9		28 02.9	19.1	269 20.8	55.2	11 04.1	09.9									
14	31 04.5	11 08.5		43 03.6	18.3	284 23.2	55.2	26 06.3	09.8									
15	46 07.0	26 08.1		58 04.2	17.5	299 25.6	55.2	41 08.4	09.6									
16	61 09.4	41 07.7		73 04.9	16.7	314 27.9	55.1	56 10.6	09.5									
17	76 11.9	56 07.3	+7 38.5	88 05.5	-6 16.0	329 30.3	+22 55.1	71 12.8	-0 09.4									
18	91 14.3	71 07.0	+7 39.7	103 06.2	-6 15.2	344 32.6	+22 55.1	86 15.0	-0 09.3									
19	106 16.8	86 06.6		118 06.8	14.4	359 35.0	55.1	101 17.1	09.1									
20	121 19.3	101 06.2		133 07.5	13.7	14 37.3	55.1	116 19.3	09.0									
21	136 21.7	116 05.8		148 08.1	12.9	29 39.7	55.1	131 21.5	08.9									
22	151 24.2	131 05.4		163 08.8	12.1	44 42.0	55.1	146 23.7	08.8									
23	166 26.7	146 05.0		178 09.4	11.4	59 44.4	55.1	161 25.8	08.7									
24	181 29.1	161 04.6	+7 47.1	193 10.1	-6 10.6	74 46.7	+22 55.1	176 28.0	-0 08.5									
Dif	—	-4	+12	+6	+8	+24	0	+22	+1									

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 16 ^h 0 PMG:12 ^h 06.2 ^m				Edad: 4.9 ^d PHE { 4 ^h : 59/6 12 ^h : 59/5 20 ^h : 59/4 Rº: 63 ^m																		
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m	
0	178	24.1	+1	20.2	114	36.7	37	+27	01.9	55	60 N	4	17	5	08	5	50	6	22	45	2	38	88
1	193	24.3		21.2	128	59.4	36		07.4	53	58	24	11	51	6	54	51	2	06	81			
2	208	24.5		22.2	143	22.0	36		12.7	51	56	30	15	52	7	18	54	1	42	78			
3	223	24.6		23.1	157	44.6	36		17.8	51	54	35	17	53		38	55		23	76			
4	238	24.8		24.1	172	07.2	36		22.7	49	52	40	20	54	7	54	57	1	07	74			
5	253	25.0	+1	25.1	186	29.7	35	+27	27.5	48	50	4	44	5	22	5	54	8	08	58	0	53	73
6	268	25.2	+1	26.1	200	52.2	35	+27	32.0	45	45	4	52	5	27	5	56	8	37	60	0	24	71
7	283	25.4		27.1	215	14.6	34		36.4	44	40	4	58	30	57	9	00	60	0	02	70		
8	298	25.6		28.1	229	37.0	34		40.5	41	35	5	03	33	58		19	61	**	**	**		
9	313	25.8		29.0	243	59.4	34		44.5	40	30		07	35	5	59	9	36	61	**	**	**	
10	328	26.0		30.0	258	21.7	33		48.2	37	20		13	39	6	01	10	03	62	**	**	**	
11	343	26.1	+1	31.0	272	44.0	33	+27	51.8	36	10 N	5	17	5	41	6	02	10	27	63	23	42	62
12	358	26.3	+1	32.0	287	06.3	33	+27	55.2	34	0	5	18	5	42	6	03	10	49	63	23	19	63
13	13	26.5		33.0	301	28.5	32	+27	58.3	31	10 S	19		43	04	11	12	63	22	57	63		
14	28	26.7		34.0	315	50.8	33	+28	01.3	30	20	17		43	05	11	36	64		32	64		
15	43	26.9		34.9	330	13.0	32		04.1	28	30	14		42	06	12	04	64	22	04	64		
16	58	27.1		35.9	344	35.2	32		06.7	26	35	12		41	06		21	64	21	47	64		
17	73	27.3	+1	36.9	358	57.4	32	+28	09.1	24	40	5	08	5	40	6	07	12	40	65	21	27	65
18	88	27.5	+1	37.9	13	19.5	31	+28	11.3	22	45	5	04	5	38	6	07	13	04	64	21	03	65
19	103	27.6		38.9	27	41.7	32		13.3	18	50	4	58		36	08		34	65	20	32	66	
20	118	27.8		39.9	42	03.9	32		15.1	18	52		55	35	08	13	49	65	20	17	66		
21	133	28.0		40.9	56	26.0	31		16.7	16	54		52	33	09	14	07	65	19	59	67		
22	148	28.2		41.8	70	48.2	32		18.1	14	56		48	32	09		29	64		38	66		
23	163	28.4		42.8	85	10.3	31		19.3	12	58		44	30	09	14	56	64	19	10	67		
24	178	28.6	+1	43.8	99	32.5	32	+28	20.3	10	60 S	4	39	5	28	6	10	15	35	64	18	31	68
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 11 ^h 52.1 ^m			Mag: -3.9 PMG: 13 ^h 16 ^m			Mag: +1.2 PMG: 11 ^h 07 ^m			Mag: -2.3 PMG: 18 ^h 58 ^m			Mag: +0.9 PMG: 12 ^h 12 ^m										
	hG ♀		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'							
0	181	29.1	161	04.6	+7	47.1	193	10.1	-6	10.6	74	46.7	+22	55.1	176	28.0							
1	196	31.6	176	04.2		48.4	208	10.7		09.8	89	49.1		55.1	191	30.2							
2	211	34.1	191	03.8		49.6	223	11.4		09.0	104	51.4		55.0	206	32.4							
3	226	36.5	206	03.4		50.8	238	12.0		08.3	119	53.8		55.0	221	34.6							
4	241	39.0	221	03.0		52.1	253	12.7		07.5	134	56.1		55.0	236	36.7							
5	256	41.5	236	02.6	+7	53.3	268	13.3	-6	06.7	149	58.5	+22	55.0	251	38.9							
6	271	43.9	251	02.2	+7	54.5	283	14.0	-6	06.0	165	00.9	+22	55.0	266	41.1							
7	286	46.4	266	01.8		55.8	298	14.6		05.2	180	03.2		55.0	281	43.3							
8	301	48.8	281	01.4		57.0	313	15.3		04.4	195	05.6		55.0	296	45.4							
9	316	51.3	296	01.0		58.2	328	15.9		03.6	210	07.9		55.0	311	47.6							
10	331	53.8	311	00.6	+7	59.5	343	16.6		02.9	225	10.3		55.0	326	49.8							
11	346	56.2	326	00.2	+8	00.7	358	17.2	-6	02.1	240	12.6	+22	55.0	341	52.0							
12	1	58.7	340	59.8	+8	01.9	13	17.9	-6	01.3	255	14.9	+22	54.9	356	54.2							
13	17	01.2	355	59.4		03.2	28	18.5	-6	00.6	270	17.3		54.9	11	56.3							
14	32	03.6	10	59.0		04.4	43	19.2	-5	59.8	285	19.6		54.9	26	58.5							
15	47	06.1	25	58.6		05.6	58	19.8		59.0	300	22.0		54.9	42	00.7							
16	62	08.6	40	58.2		06.9	73	20.5		58.2	315	24.3		54.9	57	02.9							
17	77	11.0	55	57.8	+8	08.1	88	21.1	-5	57.5	330	26.7	+22	54.9	72	05.0							
18	92	13.5	70	57.4	+8	09.3	103	21.8	-5	56.7	345	29.0	+22	54.9	87	07.2							
19	107	15.9	85	57.0		10.6	118	22.4		55.9	0	31.4		54.9	102	09.4							
20	122	18.4	100	56.6		11.8	133	23.1		55.2	15	33.7		54.9	117	11.6							
21	137	20.9	115	56.2		13.0	148	23.7		54.4	30	36.1		54.8	132	13.8							
22	152	23.3	130	55.8		14.2	163	24.4		53.6	45	38.4		54.8	147	15.9							
23	167	25.8	145	55.4		15.5	178	25.0		52.8	60	40.8		54.8	162	18.1							
24	182	28.3	160	55.0	+8	16.7	193	25.7	-5	52.1	75	43.1	+22	54.8	177	20.3							
Dif	—		-4		+12		+7		+8		+23		0		+22		+1						

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16/0 PMG:12 ^h 05.9 ^m			Edad: 5.9 ^d PHE { 4 ^h : 59/3 12 ^h : 59/2 20 ^h : 59/1 PMG: 18 ^h 07 ^m Rº: 62 ^m								Civil		Náutico	Hora	Rº	Hora	Rº			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif														
h	° /	° /	° /	° /		° /		°		h m	h m	h m	h m m	h m m	h m m	h m m	h m m				
0	178	28.6	+1	43.8		99	32.5	32	+28	20.3	8	18 27	19 09	20 00	7 07	90	4 06	42			
1	193	28.8		44.8		113	54.7	31		21.1	6	25	05	19 53	7 45	83	3 27	50			
2	208	29.0		45.8		128	16.8	32		21.7	4	24	19 01	47	8 12	80	3 00	53			
3	223	29.2		46.8		142	39.0	32		22.1	2	23	18 58	41	33	78	2 39	55			
4	238	29.3		47.7		157	01.2	32		22.3	0	22	56	36	8 51	76	21	56			
5	253	29.5	+1	48.7		171	23.4	32	+28	22.3	0	18 21	18 53	19 32	9 06	74	2 06	57			
6	268	29.7	+1	49.7		185	45.7	33	+28	22.1	2	18 19	18 48	19 23	9 37	72	1 35	59			
7	283	29.9		50.7		200	08.0	33		21.8	3	17	44	16	10 00	71	1 12	60			
8	298	30.1		51.7		214	30.2	32		21.2	6	16	41	11	20	69	0 52	61			
9	313	30.3		52.7		228	52.6	34		20.4	8	14	38	06	10 37	68	35	62			
10	328	30.5		53.6		243	14.9	33		19.5	9	12	34	19 00	11 05	66	0 07	62			
11	343	30.7	+1	54.6		257	37.3	34	+28	18.3	12	18 11	18 32	18 56	11 30	64	**	**	**		
12	358	30.9	+1	55.6		271	59.7	34	+28	16.9	14	18 09	18 30	18 54	11 52	63	**	**	**		
13	13	31.0		56.6		286	22.2	35		15.4	15	08	29	53	12 15	61	**	**	**		
14	28	31.2		57.6		300	44.7	35		13.7	17	06	28	54	12 40	59	23	36	66		
15	43	31.4		58.5		315	07.2	35		11.7	20	05	29	57	13 08	57	23	08	69		
16	58	31.6	+1	59.5		329	29.8	36		09.6	21	04	29	18 59	25	56	22	51	71		
17	73	31.8	+2	00.5		343	52.4	36	+28	07.3	23	18 03	18 30	19 02	13 45	54	22	32	73		
18	88	32.0	+2	01.5		358	15.1	37	+28	04.8	25	18 02	18 32	19 06	14 08	52	22	08	76		
19	103	32.2		02.5		12	37.9	38	+28	02.1	27	01	34	11	39	48	21	38	80		
20	118	32.4		03.5		27	00.6	37	+27	59.2	29	01	34	14	14 54	47	23	82			
21	133	32.5		04.4		41	23.5	39		56.1	31	00	36	17	15 12	44	21	06	85		
22	148	32.7		05.4		55	46.4	39		52.9	32	18 00	37	20	15 33	40	20	44	89		
23	163	32.9		06.4		70	09.4	40		49.4	35	17 59	38	24	16 00	35	20	17	95		
24	178	33.1	+2	07.4		84	32.4	40	+27	45.8	36	17 59	18 40	19 29	16 39	23	19	39	107		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO									
	PMG 11 ^h 48.2 ^m		Mag: -3.9 PMG: 13 ^h 17 ^m			Mag: +1.3 PMG: 11 ^h 06 ^m			Mag: -2.2 PMG: 18 ^h 54 ^m			Mag: +0.9 PMG: 12 ^h 09 ^m									
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec				
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /		
0	182	28.3		160	55.0	+8	16.7		193	25.7	-5	52.1		75	43.1	+22	54.8	177	20.3	-0	05.6
1	197	30.7		175	54.6		17.9		208	26.3		51.3		90	45.5		54.8	192	22.5		05.5
2	212	33.2		190	54.2		19.2		223	27.0		50.5		105	47.8		54.8	207	24.6		05.3
3	227	35.7		205	53.8		20.4		238	27.6		49.8		120	50.1		54.8	222	26.8		05.2
4	242	38.1		220	53.4		21.6		253	28.3		49.0		135	52.5		54.8	237	29.0		05.1
5	257	40.6		235	53.0	+8	22.8		268	28.9	-5	48.2		150	54.8	+22	54.8	252	31.2	-0	05.0
6	272	43.1		250	52.6	+8	24.1		283	29.6	-5	47.4		165	57.2	+22	54.7	267	33.3	-0	04.8
7	287	45.5		265	52.2		25.3		298	30.2		46.7		180	59.5		54.7	282	35.5		04.7
8	302	48.0		280	51.8		26.5		313	30.9		45.9		196	01.9		54.7	297	37.7		04.6
9	317	50.4		295	51.4		27.7		328	31.5		45.1		211	04.2		54.7	312	39.9		04.5
10	332	52.9		310	51.0		29.0		343	32.2		44.3		226	06.5		54.7	327	42.1		04.3
11	347	55.4		325	50.6	+8	30.2		358	32.8	-5	43.6		241	08.9	+22	54.7	342	44.2	-0	04.2
12	2	57.8		340	50.2	+8	31.4		13	33.5	-5	42.8		256	11.2	+22	54.7	357	46.4	-0	04.1
13	18	00.3		355	49.8		32.6		28	34.1		42.0		271	13.6		54.7	12	48.6		04.0
14	33	02.8		10	49.4		33.9		43	34.8		41.3		286	15.9		54.7	27	50.8		03.9
15	48	05.2		25	49.0		35.1		58	35.5		40.5		301	18.2		54.6	42	52.9		03.7
16	63	07.7		40	48.6		36.3		73	36.1		39.7		316	20.6		54.6	57	55.1		03.6
17	78	10.2		55	48.2	+8	37.5		88	36.8	-5	38.9		331	22.9	+22	54.6	72	57.3	-0	03.5
18	93	12.6		70	47.8	+8	38.8		103	37.4	-5	38.2		346	25.3	+22	54.6	87	59.5	-0	03.4
19	108	15.1		85	47.4		40.0		118	38.1		37.4		1	27.6		54.6	103	01.7		03.2
20	123	17.6		100	47.0		41.2		133	38.7		36.6		16	29.9		54.6	118	03.8		03.1
21	138	20.0		115	46.5		42.4		148	39.4		35.8		31	32.3		54.6	133	06.0		03.0
22	153	22.5		130	46.1		43.6		163	40.0		35.1		46	34.6		54.6	148	08.2		02.9
23	168	24.9		145	45.7		44.9		178	40.7		34.3		61	36.9		54.6	163	10.4		02.8
24	183	27.4		160	45.3	+8	46.1		193	41.3	-5	33.5		76	39.3	+22	54.5	178	12.5	-0	02.6
Dif	—		-4		+12		+7		+8		+23		0		+22		+		+		

UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0 PMG: 12 ^h 05.6 ^m			Edad: 6.9 ^d PHE { 4 ^h : 58'9 12 ^h : 58'8 20 ^h : 58'7 Rº: 57 ^m														
	hG ☉	Dec		hG ☾	Dif		Dec	Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	33.1	+2	07.4	84	32.4	41	+27	45.8	38	60 N	4 10	5 02	5 44	8 36	108	4 47	14
1	193	33.3		08.4	98	55.5	42		42.0	40	58	18	06	45	9 07	98	4 15	24
2	208	33.5		09.3	113	18.7	42		38.0	42	56	24	09	47	30	92	3 52	29
3	223	33.7		10.3	127	41.9	42		33.8	44	54	30	12	48	9 49	88	32	34
4	238	33.9		11.3	142	05.2	43		29.4	45	52	35	15	49	10 05	85	16	37
5	253	34.1	+2	12.3	156	28.6	44	+27	24.9	44	50	4 39	5 18	5 50	10 19	82	3 02	39
6	268	34.2	+2	13.3	170	52.0	44	+27	20.2	47	45	4 48	5 23	5 52	10 47	77	2 33	44
7	283	34.4		14.2	185	15.6	46		15.3	49	40	4 55	27	54	11 09	73	2 10	48
8	298	34.6		15.2	199	39.2	46		10.2	51	35	5 00	30	55	28	70	1 52	49
9	313	34.8		16.2	214	02.9	47	+27	05.0	52	30	05	33	57	11 43	68	35	52
10	328	35.0		17.2	228	26.7	48	+26	59.5	55	20	11	37	5 59	12 10	64	1 08	55
11	343	35.2	+2	18.2	242	50.5	48	+26	53.9	56	10 N	5 15	5 40	6 01	12 33	60	0 44	58
12	358	35.4	+2	19.2	257	14.5	50	+26	48.2	57	0	5 18	5 42	6 02	12 54	58	0 22	60
13	13	35.6		20.1	271	38.5	50		42.2	60	10 S	19	43	04	13 15	55	0 00	62
14	28	35.8		21.1	286	02.6	51		36.1	61	20	18	43	05	13 38	51	** ** *	
15	43	35.9		22.1	300	26.8	52		29.9	62	30	15	43	07	14 04	47	** ** *	
16	58	36.1		23.1	314	51.1	53		23.4	65	35	13	43	08	19	45	** ** *	
17	73	36.3	+2	24.1	329	15.5	54	+26	16.8	66	40	5 10	5 42	6 09	14 37	42	23 44	73
18	88	36.5	+2	25.0	343	40.0	55	+26	10.0	68	45	5 06	5 41	6 10	14 59	38	23 23	78
19	103	36.7		26.0	358	04.6	56	+26	03.1	69	50	5 01	39	11	15 26	33	22 57	83
20	118	36.9		27.0	12	29.3	57	+25	56.0	71	52	4 59	38	12	39	30	44	87
21	133	37.1		28.0	26	54.0	57		48.8	72	54	56	37	12	15 54	27	29	91
22	148	37.3		29.0	41	18.9	59		41.4	74	56	52	36	13	16 12	22	22 12	95
23	163	37.5		29.9	55	43.9	60		33.8	76	58	48	35	14	16 33	16	21 51	101
24	178	37.6	+2	30.9	70	09.0	61	+25	26.1	77	60 S	4 44	5 33	6 14	17 01	7	21 24	111

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 11 ^h 44.2 ^m		Mag: -3.9 PMG: 13 ^h 17 ^m		Mag: +1.3 PMG: 11 ^h 05 ^m		Mag: -2.2 PMG: 18 ^h 50 ^m		Mag: +0.9 PMG: 12 ^h 05 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	183	27.4	160	45.3	+8	46.1	193	41.3	-5	33.5	
1	198	29.9	175	44.9		47.3	208	42.0		32.7	
2	213	32.3	190	44.5		48.5	223	42.6		32.0	
3	228	34.8	205	44.1		49.7	238	43.3		31.2	
4	243	37.3	220	43.7		51.0	253	44.0		30.4	
5	258	39.7	235	43.3	+8	52.2	268	44.6	-5	29.6	
6	273	42.2	250	42.9	+8	53.4	283	45.3	-5	28.9	
7	288	44.7	265	42.5		54.6	298	45.9		28.1	
8	303	47.1	280	42.1		55.8	313	46.6		27.3	
9	318	49.6	295	41.7		57.0	328	47.2		26.5	
10	333	52.1	310	41.3		58.3	343	47.9		25.8	
11	348	54.5	325	40.8	+8	59.5	358	48.5	-5	25.0	
12	3	57.0	340	40.4	+9	00.7	13	49.2	-5	24.2	
13	18	59.4	355	40.0		01.9	28	49.8		23.4	
14	34	01.9	10	39.6		03.1	43	50.5		22.7	
15	49	04.4	25	39.2		04.3	58	51.2		21.9	
16	64	06.8	40	38.8		05.6	73	51.8		21.1	
17	79	09.3	55	38.4	+9	06.8	88	52.5	-5	20.3	
18	94	11.8	70	38.0	+9	08.0	103	53.1	-5	19.6	
19	109	14.2	85	37.6		09.2	118	53.8		18.8	
20	124	16.7	100	37.1		10.4	133	54.4		18.0	
21	139	19.2	115	36.7		11.6	148	55.1		17.2	
22	154	21.6	130	36.3		12.8	163	55.8		16.5	
23	169	24.1	145	35.9		14.1	178	56.4		15.7	
24	184	26.6	160	35.5	+9	15.3	193	57.1	-5	14.9	
Dif	—		-4	+12		+7	+8	+23	0	+22	+1

UT	SOL			☾ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna							
	SD: 16'0 PMG:12 ^h 05.3 ^m			Edad: 7.9 ^d PHE { 4 ^h : 58'5 12 ^h : 58'4 20 ^h : 58'2 R°: 53 ^m																			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m				
0	178	37.6	+2	30.9	70	09.0	61	+25	26.1	79	60 N	18	32	19	14	20	06	10	24	109	5	01	6
1	193	37.8		31.9	84	34.1	63		18.2	80	58	30	09	19	58	10	45	101	4	39	14		
2	208	38.0		32.9	98	59.4	64		10.2	82	56	28	06	51	11	02	96	21	19				
3	223	38.2		33.8	113	24.8	64	+25	02.0	83	54	26	19	02	45	17	91	4	06	23			
4	238	38.4		34.8	127	50.3	65	+24	53.7	84	52	25	18	59	40	30	88	3	53	26			
5	253	38.6	+2	35.8	142	15.9	66	+24	45.3	84	50	18	24	18	56	19	35	11	41	85	3	41	29
6	268	38.8	+2	36.8	156	41.5	66	+24	36.6	87	45	18	21	18	51	19	26	12	04	79	3	17	35
7	283	39.0		37.8	171	07.3	68		27.9	87	40	19	46	18	22	75	2	58	38				
8	298	39.2		38.7	185	33.2	69		19.0	89	35	17	43	12	38	71	41	42					
9	313	39.3		39.7	199	59.3	71		10.0	90	30	16	40	08	12	51	68	27	45				
10	328	39.5		40.7	214	25.4	71	+24	00.8	92	20	13	35	19	01	13	14	63	2	03	49		
11	343	39.7	+2	41.7	228	51.6	72	+23	51.5	93	10 N	18	11	18	32	18	56	13	33	59	1	42	53
12	358	39.9	+2	42.7	243	17.9	73	+23	42.0	95	0	18	09	18	29	18	53	13	52	54	1	22	57
13	13	40.1		43.6	257	44.4	75		32.4	96	10 S	07	28	52	14	10	50	1	02	61			
14	28	40.3		44.6	272	10.9	75		22.7	97	20	05	27	52	29	46	0	41	64				
15	43	40.5		45.6	286	37.6	77		12.9	98	30	03	26	54	14	51	42	16	69				
16	58	40.7		46.6	301	04.4	78	+23	02.9	100	35	01	27	56	15	04	39	0	01	72			
17	73	40.9	+2	47.5	315	31.2	78	+22	52.8	101	40	18	00	18	27	18	59	15	19	35	**	**	**
18	88	41.0	+2	48.5	329	58.2	80	+22	42.6	102	45	17	59	18	28	19	02	15	37	30	**	**	**
19	103	41.2		49.5	344	25.3	81		32.2	104	50	57	29	07	15	59	24	**	**	**	**	**	**
20	118	41.4		50.5	358	52.5	82		21.8	104	52	56	30	09	16	09	22	**	**	**	**	**	**
21	133	41.6		51.5	13	19.8	83		11.2	106	54	55	31	12	21	18	**	**	**	**	**	**	**
22	148	41.8		52.4	27	47.2	84	+22	00.4	108	56	55	31	15	34	14	23	47	95				
23	163	42.0		53.4	42	14.8	86	+21	49.6	108	58	54	33	18	16	49	10	32	100				
24	178	42.2	+2	54.4	56	42.4	86	+21	38.7	109	60 S	17	52	18	34	19	22	17	08	3	23	15	106

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 11 ^h 40.3 ^m		Mag: -3.9 PMG: 13 ^h 18 ^m		Mag: +1.3 PMG: 11 ^h 04 ^m		Mag: -2.2 PMG: 18 ^h 47 ^m		Mag: +0.9 PMG: 12 ^h 02 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	184	26.6	160	35.5	+9	15.3	193	57.1	-5	14.9	77	35.2	+22	54.2	179	04.8	+0	00.3
1	199	29.0	175	35.1		16.5	208	57.7		14.1	92	37.6		54.2	194	07.0		00.4
2	214	31.5	190	34.7		17.7	223	58.4		13.4	107	39.9		54.2	209	09.2		00.6
3	229	33.9	205	34.3		18.9	238	59.0		12.6	122	42.2		54.2	224	11.3		00.7
4	244	36.4	220	33.8		20.1	253	59.7		11.8	137	44.6		54.2	239	13.5		00.8
5	259	38.9	235	33.4	+9	21.3	269	00.4	-5	11.0	152	46.9	+22	54.2	254	15.7	+0	00.9
6	274	41.3	250	33.0	+9	22.5	284	01.0	-5	10.3	167	49.2	+22	54.2	269	17.9	+0	01.0
7	289	43.8	265	32.6		23.7	299	01.7		09.5	182	51.5		54.2	284	20.0		01.2
8	304	46.3	280	32.2		24.9	314	02.3		08.7	197	53.9		54.1	299	22.2		01.3
9	319	48.7	295	31.8		26.1	329	03.0		07.9	212	56.2		54.1	314	24.4		01.4
10	334	51.2	310	31.4		27.4	344	03.6		07.2	227	58.5		54.1	329	26.6		01.5
11	349	53.7	325	30.9	+9	28.6	359	04.3	-5	06.4	243	00.8	+22	54.1	344	28.7	+0	01.7
12	4	56.1	340	30.5	+9	29.8	14	05.0	-5	05.6	258	03.2	+22	54.1	359	30.9	+0	01.8
13	19	58.6	355	30.1		31.0	29	05.6		04.8	273	05.5		54.1	14	33.1		01.9
14	35	01.0	10	29.7		32.2	44	06.3		04.1	288	07.8		54.1	29	35.3		02.0
15	50	03.5	25	29.3		33.4	59	06.9		03.3	303	10.1		54.1	44	37.5		02.2
16	65	06.0	40	28.9		34.6	74	07.6		02.5	318	12.4		54.0	59	39.6		02.3
17	80	08.4	55	28.4	+9	35.8	89	08.2	-5	01.7	333	14.8	+22	54.0	74	41.8	+0	02.4
18	95	10.9	70	28.0	+9	37.0	104	08.9	-5	00.9	348	17.1	+22	54.0	89	44.0	+0	02.5
19	110	13.4	85	27.6		38.2	119	09.6	-5	00.2	3	19.4		54.0	104	46.2		02.6
20	125	15.8	100	27.2		39.4	134	10.2	-4	59.4	18	21.7		54.0	119	48.3		02.8
21	140	18.3	115	26.8		40.6	149	10.9		58.6	33	24.1		54.0	134	50.5		02.9
22	155	20.8	130	26.4		41.8	164	11.5		57.8	48	26.4		54.0	149	52.7		03.0
23	170	23.2	145	25.9		43.0	179	12.2		57.1	63	28.7		53.9	164	54.9		03.1
24	185	25.7	160	25.5	+9	44.2	194	12.9	-4	56.3	78	31.0	+22	53.9	179	57.1	+0	03.3
Dif	—		-4		+12		+7		+8		+23		0		+22		+1	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 05.0 ^m			Edad: 8.9 ^d PHE { 4 ^h : 58'1 12 ^h : 57'9 20 ^h : 57'8 R°: 48 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	42.2	+2	54.4	56	42.4	87	+21	38.7	111	60 N	4 03	4 55	5 38	12 11	101	5 06
1	193	42.4		55.4	71	10.1			27.6	112	58	11	5 00	40	25	96	4 51
2	208	42.6		56.3	85	38.0	89		16.4	112	56	18	04	41	37	91	39
3	223	42.8		57.3	100	06.0	90	+21	05.2	112	54	24	07	43	47	87	28
4	238	42.9		58.3	114	34.0	90	+20	53.8	114	52	30	10	44	12	56	84
5	253	43.1	+2	59.3	129	02.2	92	+20	42.3	115	50	4 34	5 13	5 46	13 04	82	4 09
6	268	43.3	+3	00.2	143	30.5	93	+20	30.7	116	45	4 44	5 19	5 48	13 21	76	3 50
7	283	43.5		01.2	157	58.9	94		18.9	118	40	52	24	51	35	71	35
8	298	43.7		02.2	172	27.4	95	+20	07.1	118	35	4 58	27	53	47	67	22
9	313	43.9		03.2	186	56.0	96	+19	55.2	119	30	5 02	30	54	13	58	63
10	328	44.1		04.2	201	24.7	97		43.2	120	20	09	35	5 57	14	15	58
11	343	44.3	+3	05.1	215	53.5	98	+19	31.1	121	10 N	5 14	5 39	6 00	14 30	54	2 34
12	358	44.5	+3	06.1	230	22.4	99	+19	18.9	122	0	5 17	5 41	6 02	14 45	49	2 17
13	13	44.6		07.1	244	51.4	100	+19	06.6	123	10 S	18	43	04	14 59	44	2 01
14	28	44.8		08.1	259	20.5	101	+18	54.2	124	20	18	44	06	15 14	40	1 44
15	43	45.0		09.0	273	49.7	102		41.7	125	30	17	44	08	31	34	23
16	58	45.2		10.0	288	19.1	104		29.1	126	35	15	44	09	41	31	1 11
17	73	45.4	+3	11.0	302	48.5	104	+18	16.5	126	40	5 12	5 44	6 11	15 53	27	0 57
18	88	45.6	+3	12.0	317	18.0	105	+18	03.7	128	45	5 09	5 43	6 12	16 06	23	0 41
19	103	45.8		12.9	331	47.6	106	+17	50.9	128	50	04	42	14	22	17	20
20	118	46.0		13.9	346	17.4	108		37.9	130	52	02	41	15	29	15	11
21	133	46.2		14.9	0	47.2	108		24.9	130	54	5 00	41	16	38	12	0 00
22	148	46.3		15.9	15	17.1	109	+17	11.9	130	56	4 57	40	17	47	9	** ** *
23	163	46.5		16.8	29	47.1	110	+16	58.7	132	58	53	39	18	16	58	4
24	178	46.7	+3	17.8	44	17.2	111	+16	45.5	132	60 S	4 49	5 38	6 19	17 10	0	** ** *

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 36.4 ^m		Mag: -3.9 PMG: 13 ^h 19 ^m		Mag: +1.2 PMG: 11 ^h 03 ^m		Mag: -2.2 PMG: 18 ^h 43 ^m		Mag: +0.9 PMG: 11 ^h 58 ^m	
	hG ♊	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	185	25.7	160	25.5	+9	44.2	194	12.9	-4	56.3
1	200	28.2	175	25.1		45.4	209	13.5		55.5
2	215	30.6	190	24.7		46.6	224	14.2		54.7
3	230	33.1	205	24.3		47.8	239	14.8		54.0
4	245	35.5	220	23.8		49.0	254	15.5		53.2
5	260	38.0	235	23.4	+9	50.2	269	16.2	-4	52.4
6	275	40.5	250	23.0	+9	51.4	284	16.8	-4	51.6
7	290	42.9	265	22.6		52.6	299	17.5		50.8
8	305	45.4	280	22.2		53.8	314	18.1		50.1
9	320	47.9	295	21.7		55.0	329	18.8		49.3
10	335	50.3	310	21.3		56.2	344	19.5		48.5
11	350	52.8	325	20.9	+9	57.4	359	20.1	-4	47.7
12	5	55.3	340	20.5	+9	58.6	14	20.8	-4	47.0
13	20	57.7	355	20.0	+9	59.8	29	21.4		46.2
14	36	00.2	10	19.6	+10	01.0	44	22.1		45.4
15	51	02.7	25	19.2		02.2	59	22.8		44.6
16	66	05.1	40	18.8		03.4	74	23.4		43.8
17	81	07.6	55	18.3	+10	04.6	89	24.1	-4	43.1
18	96	10.0	70	17.9	+10	05.8	104	24.7	-4	42.3
19	111	12.5	85	17.5		07.0	119	25.4		41.5
20	126	15.0	100	17.1		08.2	134	26.1		40.7
21	141	17.4	115	16.7		09.4	149	26.7		40.0
22	156	19.9	130	16.2		10.6	164	27.4		39.2
23	171	22.4	145	15.8		11.8	179	28.0		38.4
24	186	24.8	160	15.4	+10	13.0	194	28.7	-4	37.6
Dif	—		-4		+12		+7		+8	
							+23		0	
									+22	
									+1	

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG:12 ^h 04.7 ^m			Edad: 9.9 ^d PHE { 4 ^h : 57/6 12 ^h : 57/5 20 ^h : 57/3 R°: 46 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	h m	h m	h m	h m	
0	178 46.7	+3 17.8	44 17.2	+16 45.5	134	60 N	18 36	19 19	20 12	13 52	96	5 07	2				
1	193 46.9	18.8	58 47.4	32.1	133	58	34	14	20 03	14 01	91	4 58	5				
2	208 47.1	19.8	73 17.7	18.8	135	56	32	10	19 56	08 88	50	9					
3	223 47.3	20.7	87 48.1	+16 05.3	135	54	30	06	49	14 85	42	12					
4	238 47.5	21.7	102 18.6	+15 51.8	135	52	29	03	44	20 82	35	15					
5	253 47.7	+3 22.7	116 49.1	+15 38.2	136	50	18 27	19 00	19 39	14 26	79	4 29	18				
6	268 47.8	+3 23.6	131 19.8	+15 24.5	137	45	18 24	18 53	19 28	14 37	74	4 16	23				
7	283 48.0	24.6	145 50.5	+15 10.8	137	40	21	48	20	46 70	4 05	27					
8	298 48.2	25.6	160 21.4	+14 56.9	139	35	19	44	14	14 54	66	3 56	30				
9	313 48.4	26.6	174 52.3	43.1	138	30	17	41	09	15 01	63	48	33				
10	328 48.6	27.5	189 23.3	29.2	139	20	13	36	19 01	13 57	33	39					
11	343 48.8	+3 28.5	203 54.4	+14 15.2	140	10 N	18 11	18 32	18 56	15 24	51	3 21	44				
12	358 49.0	+3 29.5	218 25.6	+14 01.1	141	0	18 08	18 29	18 53	15 34	47	3 09	48				
13	13 49.2	30.5	232 56.8	+13 47.0	141	10 S	06	27	51	43 43	2 56	54					
14	28 49.4	31.4	247 28.2	32.8	142	20	03	25	51	15 54	37	43	59				
15	43 49.5	32.4	261 59.6	18.6	142	30	18 00	24	52	16 05	32	28	64				
16	58 49.7	33.4	276 31.1	+13 04.4	142	35	17 59	24	53	12 29	20	67					
17	73 49.9	+3 34.4	291 02.7	+12 50.0	143	40	17 57	18 24	18 55	16 20	25	2 10	71				
18	88 50.1	+3 35.3	305 34.3	+12 35.7	143	45	17 55	18 24	18 58	16 29	21	1 58	75				
19	103 50.3	36.3	320 06.1	21.2	145	50	53	25	19 02	39 16	43	82					
20	118 50.5	37.3	334 37.9	+12 06.8	144	52	52	25	04	44 14	37	84					
21	133 50.7	38.2	349 09.8	+11 52.2	146	54	51	26	07	50 10	29	87					
22	148 50.9	39.2	3 41.7	37.7	145	56	49	26	09	16 56	8	21	90				
23	163 51.1	40.2	18 13.8	23.1	146	58	48	27	13	17 02	5	11	95				
24	178 51.2	+3 41.2	32 45.9	+11 08.4	147	60 S	17 46	18 28	19 16	17 10	1	1 00	99				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 11 ^h 32.4 ^m		Mag: -3.9 PMG: 13 ^h 19 ^m		Mag: +1.2 PMG: 11 ^h 02 ^m		Mag: -2.2 PMG: 18 ^h 39 ^m		Mag: +0.9 PMG: 11 ^h 55 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	186 24.8	160 15.4	+10 13.0	194 28.7	-4 37.6	79 26.6	+22 53.6	180 49.3	+0 06.2	
1	201 27.3	175 14.9	14.2	209 29.4	36.8	94 28.9	53.6	195 51.5	06.3	
2	216 29.8	190 14.5	15.4	224 30.0	36.1	109 31.2	53.6	210 53.7	06.4	
3	231 32.2	205 14.1	16.5	239 30.7	35.3	124 33.5	53.5	225 55.8	06.6	
4	246 34.7	220 13.7	17.7	254 31.4	34.5	139 35.8	53.5	240 58.0	06.7	
5	261 37.2	235 13.2	+10 18.9	269 32.0	-4 33.7	154 38.2	+22 53.5	256 00.2	+0 06.8	
6	276 39.6	250 12.8	+10 20.1	284 32.7	-4 32.9	169 40.5	+22 53.5	271 02.4	+0 06.9	
7	291 42.1	265 12.4	21.3	299 33.3	32.2	184 42.8	53.5	286 04.6	07.0	
8	306 44.5	280 12.0	22.5	314 34.0	31.4	199 45.1	53.5	301 06.7	07.2	
9	321 47.0	295 11.5	23.7	329 34.7	30.6	214 47.4	53.5	316 08.9	07.3	
10	336 49.5	310 11.1	24.9	344 35.3	29.8	229 49.7	53.4	331 11.1	07.4	
11	351 51.9	325 10.7	+10 26.1	359 36.0	-4 29.1	244 52.0	+22 53.4	346 13.3	+0 07.5	
12	6 54.4	340 10.2	+10 27.2	14 36.6	-4 28.3	259 54.3	+22 53.4	1 15.4	+0 07.7	
13	21 56.9	355 09.8	28.4	29 37.3	27.5	274 56.6	53.4	16 17.6	07.8	
14	36 59.3	10 09.4	29.6	44 38.0	26.7	289 58.9	53.4	31 19.8	07.9	
15	52 01.8	25 09.0	30.8	59 38.6	25.9	305 01.2	53.4	46 22.0	08.0	
16	67 04.3	40 08.5	32.0	74 39.3	25.2	320 03.5	53.4	61 24.2	08.1	
17	82 06.7	55 08.1	+10 33.2	89 40.0	-4 24.4	335 05.9	+22 53.3	76 26.3	+0 08.3	
18	97 09.2	70 07.7	+10 34.4	104 40.6	-4 23.6	350 08.2	+22 53.3	91 28.5	+0 08.4	
19	112 11.6	85 07.2	35.6	119 41.3	22.8	5 10.5	53.3	106 30.7	08.5	
20	127 14.1	100 06.8	36.7	134 42.0	22.0	20 12.8	53.3	121 32.9	08.6	
21	142 16.6	115 06.4	37.9	149 42.6	21.3	35 15.1	53.3	136 35.0	08.8	
22	157 19.0	130 05.9	39.1	164 43.3	20.5	50 17.4	53.3	151 37.2	08.9	
23	172 21.5	145 05.5	40.3	179 43.9	19.7	65 19.7	53.2	166 39.4	09.0	
24	187 24.0	160 05.1	+10 41.5	194 44.6	-4 18.9	80 22.0	+22 53.2	181 41.6	+0 09.1	
Dif	—	-4	+12	+7	+8	+23	0	+22	+	

UT	SOL			O LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG:12 ^h 04.4 ^m			Edad: 10.9 ^d PHE { 4 ^h : 57'1 12 ^h : 57'0 20 ^h : 56'8 Rº: 43 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	°	h	m	h	m	h	m	h	m		
0	178	51.2	+3	41.2	32	45.9	+11	08.4	60 N	3	56	4	49	5	32	15	27 90		
1	193	51.4		42.1	47	18.0	+10	53.7	58	4	05		54	34	31	87	5 02 **		
2	208	51.6		43.1	61	50.3		39.0	56	12		4	58	36	35	83	4 57 6		
3	223	51.8		44.1	76	22.6		24.2	54	19		5	02	38	38	81	53 9		
4	238	52.0		45.0	90	55.0	+10	09.4	52	25			06	40	41	78	49 11		
5	253	52.2	+3	46.0	105	27.4	+9	54.5	50	4	30		5	09	5	44	75 4 45 14		
6	268	52.4	+3	47.0	119	59.9	+9	39.7	45	4	40		5	15	5	49	71 4 37 19		
7	283	52.6		48.0	134	32.5		24.8	40	48		20	47	54	66	31	22		
8	298	52.7		48.9	149	05.1	+9	09.8	35	4	55		24	50	15	59	61 25 26		
9	313	52.9		49.9	163	37.8	+8	54.8	30	5	00		28	52	16	02	59 20 29		
10	328	53.1		50.9	178	10.5		39.8	20		08		33	55	08	53	11 35		
11	343	53.3	+3	51.8	192	43.3	+8	24.8	10 N	5	13		5	37	5	58	16 14 48 4 03 40		
12	358	53.5	+3	52.8	207	16.2	+8	09.7	0	5	16		5	40	6	01	16 19 44 3 56 44		
13	13	53.7		53.8	221	49.1	+7	54.6	10 S	18			43	04	24	39	48 49		
14	28	53.9		54.7	236	22.1		39.5	20	19			44	06	30	34	40 54		
15	43	54.1		55.7	250	55.1		24.4	30	18			46	09	36	28	31 60		
16	58	54.3		56.7	265	28.2	+7	09.2	35	16			46	11	40	25	25 63		
17	73	54.4	+3	57.7	280	01.3	+6	54.0	40	5	14		5	46	6	13	16 44 21 3 19 67		
18	88	54.6	+3	58.6	294	34.5	+6	38.8	45	5	12		5	46	6	15	16 48 18 3 12 71		
19	103	54.8	+3	59.6	309	07.8		23.6	50		08		45	17	54	13	3 03 77		
20	118	55.0	+4	00.6	323	41.0	+6	08.4	52		06		45	19	56	11	2 59 80		
21	133	55.2		01.5	338	14.4	+5	53.1	54		03		44	20	16	59	8 55 82		
22	148	55.4		02.5	352	47.7		37.9	56		5	01	44	21	17	02	6 50 85		
23	163	55.6		03.5	7	21.2		22.6	58		4	58	43	23	06	2	44 89		
24	178	55.8	+4	04.4	21	54.6	+5	07.3	60 S	4	54		5	43	6	24	17 09 ** 2 38 93		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 11 ^h 28.5 ^m		Mag: -3.9 PMG: 13 ^h 20 ^m			Mag: +1.2 PMG: 11 ^h 01 ^m			Mag: -2.2 PMG: 18 ^h 36 ^m			Mag: +0.9 PMG: 11 ^h 52 ^m							
	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°				
0	187	24.0	160	05.1	+10	41.5	194	44.6	-4	18.9	80	22.0	+22	53.2	181	41.6	+0	09.1	
1	202	26.4	175	04.6		42.6	209	45.3		18.1	95	24.3		53.2	196	43.8		09.2	
2	217	28.9	190	04.2		43.8	224	45.9		17.4	110	26.6		53.2	211	45.9		09.4	
3	232	31.4	205	03.8		45.0	239	46.6		16.6	125	28.9		53.2	226	48.1		09.5	
4	247	33.8	220	03.3		46.2	254	47.3		15.8	140	31.2		53.2	241	50.3		09.6	
5	262	36.3	235	02.9	+10	47.4	269	47.9	-4	15.0	155	33.5	+22	53.2	256	52.5	+0	09.7	
6	277	38.8	250	02.5	+10	48.6	284	48.6	-4	14.2	170	35.8	+22	53.1	271	54.6	+0	09.8	
7	292	41.2	265	02.0		49.7	299	49.3		13.5	185	38.1		53.1	286	56.8		10.0	
8	307	43.7	280	01.6		50.9	314	49.9		12.7	200	40.4		53.1	301	59.0		10.1	
9	322	46.1	295	01.2		52.1	329	50.6		11.9	215	42.7		53.1	317	01.2		10.2	
10	337	48.6	310	00.7		53.3	344	51.3		11.1	230	45.0		53.1	332	03.4		10.3	
11	352	51.1	325	00.3	+10	54.4	359	51.9	-4	10.3	245	47.3	+22	53.1	347	05.5	+0	10.5	
12	7	53.5	339	59.9	+10	55.6	14	52.6	-4	09.6	260	49.6	+22	53.0	2	07.7	+0	10.6	
13	22	56.0	354	59.4		56.8	29	53.2		08.8	275	51.9		53.0	17	09.9		10.7	
14	37	58.5	9	59.0		58.0	44	53.9		08.0	290	54.2		53.0	32	12.1		10.8	
15	53	00.9	24	58.5	+10	59.2	59	54.6		07.2	305	56.5		53.0	47	14.2		10.9	
16	68	03.4	39	58.1	+11	00.3	74	55.2		06.4	320	58.8		53.0	62	16.4		11.1	
17	83	05.9	54	57.7	+11	01.5	89	55.9	-4	05.7	336	01.1	+22	53.0	77	18.6	+0	11.2	
18	98	08.3	69	57.2	+11	02.7	104	56.6	-4	04.9	351	03.4	+22	52.9	92	20.8	+0	11.3	
19	113	10.8	84	56.8		03.9	119	57.2		04.1	6	05.7		52.9	107	22.9		11.4	
20	128	13.2	99	56.3		05.0	134	57.9		03.3	21	08.0		52.9	122	25.1		11.6	
21	143	15.7	114	55.9		06.2	149	58.6		02.5	36	10.3		52.9	137	27.3		11.7	
22	158	18.2	129	55.5		07.4	164	59.2		01.8	51	12.6		52.9	152	29.5		11.8	
23	173	20.6	144	55.0		08.5	179	59.9		01.0	66	14.9		52.9	167	31.7		11.9	
24	188	23.1	159	54.6	+11	09.7	195	00.6	-4	00.2	81	17.2	+22	52.8	182	33.8	+0	12.0	
Dif	—		-4			+12	+7			+8	+23		0			+22		+1	

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 04.1 ^m			Edad: 11.9 ^d PHE { 4 ^h : 56 ^h 7 12 ^h : 56 ^h 5 20 ^h : 56 ^h 3 R°: 44 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°	
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	h m	h m	h m	h m		
0	178 55.8	+4 04.4	21 54.6	+5 07.3	153	58 N	18 41	19 24	20 18	16 57	90	5 07	0					
1	193 55.9	05.4	36 28.1	+4 52.0	153	58	39	19	08	58 86	05 4							
2	208 56.1	06.4	51 01.7	36.7	153	56	36	14	20 01	58 83	03 7							
3	223 56.3	07.3	65 35.3	21.4	153	54	34	10	19 54	59 80	02							
4	238 56.5	08.3	80 08.9	+4 06.0	154	52	32	06	48	59 77	5 00	12						
5	253 56.7	+4 09.3	94 42.5	+3 50.7	153	50	18 30	19 03	19 42	16 59	75	4 59	14					
6	268 56.9	+4 10.2	109 16.2	+3 35.4	153	45	18 26	18 56	19 31	17 00	70	4 56	19					
7	283 57.1	11.2	123 50.0	20.0	154	40	23	50	23	00 66	53 23							
8	298 57.3	12.2	138 23.7	+3 04.7	153	35	20	46	16	00 63	51 26							
9	313 57.4	13.1	152 57.5	+2 49.3	154	30	18	42	10	01 59	49 30							
10	328 57.6	14.1	167 31.4	33.9	154	20	14	36	19 02	01 54	46 35							
11	343 57.8	+4 15.1	182 05.2	+2 18.6	153	10 N	18 11	18 32	18 56	17 02	48	4 43	40					
12	358 58.0	+4 16.0	196 39.1	+2 03.2	154	0	18 07	18 28	18 52	17 03	43	4 40	44					
13	13 58.2	17.0	211 13.1	+1 47.9	153	10 S	04	25	50	03 39	37 49							
14	28 58.4	18.0	225 47.0	32.5	154	20	18 01	23	49	04 34	34 54							
15	43 58.6	18.9	240 21.0	17.2	153	30	17 58	22	49	04 30	31 59							
16	58 58.8	19.9	254 55.0	+1 01.9	153	35	56	21	50	05 26	28 63							
17	73 58.9	+4 20.9	269 29.0	+0 46.5	154	40	17 54	18 21	18 52	17 05	23	4 26	67					
18	88 59.1	+4 21.8	284 03.1	+0 31.2	153	45	17 51	18 21	18 54	17 06	18	4 23	71					
19	103 59.3	22.8	298 37.1	15.9	153	50	48	21	18 58	07 13	20 76							
20	118 59.5	23.8	313 11.2	+0 00.6	153	52	47	21	19 00	07 11	19 78							
21	133 59.7	24.7	327 45.3	-0 14.7	153	54	46	21	02	07 9	17 81							
22	148 59.9	25.7	342 19.4	30.0	153	56	44	21	04	08 6	15 84							
23	164 00.1	26.7	356 53.6	-0 45.3	153	58	42	21	07	08 4	13 87							
24	179 00.2	+4 27.6	11 27.8	-1 00.5	152	60 S	17 40	18 22	19 10	17 08	1	4 11	90					

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 11 ^h 24.6 ^m		Mag: -3.9 PMG: 13 ^h 21 ^m		Mag: +1.2 PMG: 10 ^h 59 ^m		Mag: -2.2 PMG: 18 ^h 32 ^m		Mag: +0.9 PMG: 11 ^h 48 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	188 23.1	159 54.6	+11 09.7	195 00.6	-4 00.2	81 17.2	+22 52.8	182 33.8	+0 12.0	
1	203 25.6	174 54.1	10.9	210 01.2	-3 59.4	96 19.5	52.8	197 36.0	12.2	
2	218 28.0	189 53.7	12.1	225 01.9	58.6	111 21.8	52.8	212 38.2	12.3	
3	233 30.5	204 53.3	13.2	240 02.6	57.9	126 24.1	52.8	227 40.4	12.4	
4	248 33.0	219 52.8	14.4	255 03.2	57.1	141 26.4	52.8	242 42.5	12.5	
5	263 35.4	234 52.4	+11 15.6	270 03.9	-3 56.3	156 28.7	+22 52.8	257 44.7	+0 12.6	
6	278 37.9	249 51.9	+11 16.7	285 04.6	-3 55.5	171 31.0	+22 52.7	272 46.9	+0 12.8	
7	293 40.4	264 51.5	17.9	300 05.2	54.7	186 33.3	52.7	287 49.1	12.9	
8	308 42.8	279 51.1	19.1	315 05.9	53.9	201 35.5	52.7	302 51.3	13.0	
9	323 45.3	294 50.6	20.2	330 06.6	53.2	216 37.8	52.7	317 53.4	13.1	
10	338 47.7	309 50.2	21.4	345 07.2	52.4	231 40.1	52.7	332 55.6	13.3	
11	353 50.2	324 49.7	+11 22.6	0 07.9	-3 51.6	246 42.4	+22 52.7	347 57.8	+0 13.4	
12	8 52.7	339 49.3	+11 23.7	15 08.6	-3 50.8	261 44.7	+22 52.6	3 00.0	+0 13.5	
13	23 55.1	354 48.8	24.9	30 09.2	50.0	276 47.0	52.6	18 02.1	13.6	
14	38 57.6	9 48.4	26.1	45 09.9	49.3	291 49.3	52.6	33 04.3	13.7	
15	54 00.1	24 47.9	27.2	60 10.6	48.5	306 51.6	52.6	48 06.5	13.9	
16	69 02.5	39 47.5	28.4	75 11.2	47.7	321 53.9	52.6	63 08.7	14.0	
17	84 05.0	54 47.1	+11 29.6	90 11.9	-3 46.9	336 56.2	+22 52.6	78 10.9	+0 14.1	
18	99 07.5	69 46.6	+11 30.7	105 12.6	-3 46.1	351 58.5	+22 52.5	93 13.0	+0 14.2	
19	114 09.9	84 46.2	31.9	120 13.2	45.4	7 00.8	52.5	108 15.2	14.4	
20	129 12.4	99 45.7	33.1	135 13.9	44.6	22 03.0	52.5	123 17.4	14.5	
21	144 14.8	114 45.3	34.2	150 14.6	43.8	37 05.3	52.5	138 19.6	14.6	
22	159 17.3	129 44.8	35.4	165 15.2	43.0	52 07.6	52.5	153 21.8	14.7	
23	174 19.8	144 44.4	36.5	180 15.9	42.2	67 09.9	52.5	168 23.9	14.8	
24	189 22.2	159 43.9	+11 37.7	195 16.6	-3 41.4	82 12.2	+22 52.4	183 26.1	+0 15.0	
Dif	—	-4	+12	+7	+8	+23	0	+22	+	

UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG:12 ^h 03.8 ^m			Edad: 12.9 ^d PHE { 4 ^h : 56'2 12 ^h : 56'0 20 ^h : 55'8 R°: 43 ^m PMG: 23 ^h 55 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	m
0	179	00.2	+4	27.6	11	27.8	-1	00.5	153	60 N	3	49	4	43	5	25	18 26 89
1	194	00.4		28.6	26	01.9		15.8	153	58	3	59		48	28	23	85 07 3
2	209	00.6		29.6	40	36.1		31.0	152	56	4	06		53	31	20	81 08 6
3	224	00.8		30.5	55	10.3	-1	46.2	152	54		13	4	57	33	17	79 09 8
4	239	01.0		31.5	69	44.5	-2	01.4	152	52		19	5	01	35	15	76 10 11
5	254	01.2	+4	32.5	84	18.8	-2	16.6	152	50	4	25	5	04	5	37	18 13 73
6	269	01.4	+4	33.4	98	53.0	-2	31.7	151	45	4	36	5	11	5	41	18 08 68
7	284	01.6		34.4	113	27.2	-2	46.8	151	40		45		17	44	04	64 15 21
8	299	01.7		35.4	128	01.5	-3	01.9	151	35		52		22	47	18	01 60 16 25
9	314	01.9		36.3	142	35.8		17.0	151	30	4	57		25	50	17	58 57 17 28
10	329	02.1		37.3	157	10.0		32.1	151	20	5	06		32	54	53	52 19 34
11	344	02.3	+4	38.2	171	44.3	-3	47.1	150	10 N	5	12	5	36	5	57	17 49 47
12	359	02.5	+4	39.2	186	18.6	-4	02.1	150	0	5	16	5	40	6	01	17 45 43
13	14	02.7		40.2	200	52.8		17.1	150	10 S		18		43	04	41	38 25 47
14	29	02.9		41.1	215	27.1		32.1	150	20		19		45	07	37	34 26 52
15	44	03.0		42.1	230	01.4	-4	47.0	149	30		19		47	11	32	29 29 57
16	59	03.2		43.1	244	35.7	-5	01.9	149	35		18		47	13	30	25 30 60
17	74	03.4	+4	44.0	259	09.9	-5	16.8	149	40	5	16	5	48	6	15	17 27 21
18	89	03.6	+4	45.0	273	44.2	-5	31.6	148	45	5	14	5	48	6	17	17 23 18
19	104	03.8		46.0	288	18.5	-5	46.4	148	50		11		48	21	19	13 35 73
20	119	04.0		46.9	302	52.7	-6	01.2	148	52		09		48	22	17	11 35 76
21	134	04.2		47.9	317	27.0		15.9	147	54		07		48	23	15	8 36 79
22	149	04.3		48.8	332	01.3		30.6	147	56		05		48	25	13	5 37 82
23	164	04.5		49.8	346	35.5		45.2	146	58	5	02		48	27	10	3 39 84
24	179	04.7	+4	50.8	1	09.7	-6	59.9	147	60 S	4	59	5	47	6	29	17 07 0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 20.7 ^m		Mag: -3.9 PMG: 13 ^h 21 ^m		Mag: +1.2 PMG: 10 ^h 58 ^m		Mag: -2.2 PMG: 18 ^h 28 ^m		Mag: +0.9 PMG: 11 ^h 45 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	189	22.2	159	43.9	+11	37.7	195	16.6	-3	41.4	82	12.2	+22	52.4	183	26.1	+0	15.0
1	204	24.7	174	43.5		38.9	210	17.2		40.7	97	14.5		52.4	198	28.3		15.1
2	219	27.2	189	43.0		40.0	225	17.9		39.9	112	16.8		52.4	213	30.5		15.2
3	234	29.6	204	42.6		41.2	240	18.6		39.1	127	19.1		52.4	228	32.6		15.3
4	249	32.1	219	42.1		42.3	255	19.2		38.3	142	21.4		52.4	243	34.8		15.4
5	264	34.6	234	41.7	+11	43.5	270	19.9	-3	37.5	157	23.6	+22	52.4	258	37.0	+0	15.6
6	279	37.0	249	41.2	+11	44.7	285	20.6	-3	36.8	172	25.9	+22	52.3	273	39.2	+0	15.7
7	294	39.5	264	40.8		45.8	300	21.3		36.0	187	28.2		52.3	288	41.4		15.8
8	309	42.0	279	40.3		47.0	315	21.9		35.2	202	30.5		52.3	303	43.5		15.9
9	324	44.4	294	39.9		48.1	330	22.6		34.4	217	32.8		52.3	318	45.7		16.1
10	339	46.9	309	39.4		49.3	345	23.3		33.6	232	35.1		52.3	333	47.9		16.2
11	354	49.3	324	39.0	+11	50.4	0	23.9	-3	32.8	247	37.4	+22	52.2	348	50.1	+0	16.3
12	9	51.8	339	38.5	+11	51.6	15	24.6	-3	32.1	262	39.6	+22	52.2	3	52.2	+0	16.4
13	24	54.3	354	38.1		52.7	30	25.3		31.3	277	41.9		52.2	18	54.4		16.5
14	39	56.7	9	37.6		53.9	45	25.9		30.5	292	44.2		52.2	33	56.6		16.7
15	54	59.2	24	37.2		55.1	60	26.6		29.7	307	46.5		52.2	48	58.8		16.8
16	70	01.7	39	36.7		56.2	75	27.3		28.9	322	48.8		52.2	64	01.0		16.9
17	85	04.1	54	36.3	+11	57.4	90	27.9	-3	28.1	337	51.1	+22	52.1	79	03.1	+0	17.0
18	100	06.6	69	35.8	+11	58.5	105	28.6	-3	27.4	352	53.3	+22	52.1	94	05.3	+0	17.1
19	115	09.1	84	35.3	+11	59.7	120	29.3		26.6	7	55.6		52.1	109	07.5		17.3
20	130	11.5	99	34.9	+12	00.8	135	30.0		25.8	22	57.9		52.1	124	09.7		17.4
21	145	14.0	114	34.4		02.0	150	30.6		25.0	38	00.2		52.1	139	11.8		17.5
22	160	16.4	129	34.0		03.1	165	31.3		24.2	53	02.5		52.0	154	14.0		17.6
23	175	18.9	144	33.5		04.3	180	32.0		23.5	68	04.8		52.0	169	16.2		17.7
24	190	21.4	159	33.1	+12	05.4	195	32.6	-3	22.7	83	07.0	+22	52.0	184	18.4	+0	17.9
Dif	—		-5	+12		+7	+8				+23		0		+22		+1	

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0 PMG: 12 ^h 03.5 ^m			Edad: 13.9 ^d PHE { 4 ^h : 55 ^m 7 12 ^h : 55 ^m 5 20 ^h : 55 ^m 4 R°: **m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	179	04.7	+4	50.8	1	09.7	153	-6	59.9	145	18 46	19 29	20 24	19 55	92	5 05 1		
1	194	04.9		51.7	15	44.0	152	-7	14.4	146	43	24	14	48	87	10 4		
2	209	05.1		52.7	30	18.2	152		29.0	145	40	18	20 05	41	84	14 7		
3	224	05.3		53.6	44	52.4	152		43.5	145	38	14	19 58	36	80	17 1		
4	239	05.5		54.6	59	26.6	152	-7	57.9	144	35	10	52	31	77	21 13		
5	254	05.6	+4	55.6	74	00.8	152	-8	12.4	145	18 33	19 06	19 46	19 26	75	5 24 15		
6	269	05.8	+4	56.5	88	34.9	151	-8	26.7	143	18 29	18 59	19 34	19 16	70	5 31 20		
7	284	06.0		57.5	103	09.1	152		41.1	144	25	53	25	08	66	36 24		
8	299	06.2		58.5	117	43.2	151	-8	55.3	142	22	48	18	19 01	62	41 27		
9	314	06.4	+4	59.4	132	17.3	151	-9	09.6	143	19	43	12	18 55	59	45 31		
10	329	06.6	+5	00.4	146	51.4	151		23.8	142	15	37	19 03	45	54	53 35		
11	344	06.7	+5	01.3	161	25.5	151	-9	37.9	141	18 10	18 32	18 56	18 36	49	5 59 40		
12	359	06.9	+5	02.3	175	59.6	151	-9	52.0	141	18 07	18 28	18 52	18 28	45	6 05 45		
13	14	07.1		03.3	190	33.6	150	-10	06.0	140	03	24	49	19	41	12 48		
14	29	07.3		04.2	205	07.7	151		20.0	140	18 00	22	47	11	36	18 54		
15	44	07.5		05.2	219	41.7	150		34.0	140	17 55	19	47	18 01	31	26 58		
16	59	07.7		06.1	234	15.6	149	-10	47.9	139	53	18	48	17 55	28	30 62		
17	74	07.9	+5	07.1	248	49.6	150	-11	01.7	138	17 51	18 18	18 49	17 48	25	6 35 66		
18	89	08.0	+5	08.1	263	23.5	149	-11	15.5	138	17 48	18 17	18 51	17 41	21	6 41 70		
19	104	08.2		09.0	277	57.4	149		29.2	137	44	16	54	32	16	48 75		
20	119	08.4		10.0	292	31.3	149		42.9	137	43	16	55	28	14	51 78		
21	134	08.6		10.9	307	05.1	148	-11	56.5	136	41	16	57	23	12	55 80		
22	149	08.8		11.9	321	39.0	149	-12	10.0	135	39	16	18 59	18	9	6 59 83		
23	164	09.0		12.8	336	12.8	148		23.5	135	37	16	19 01	13	5	7 03 87		
24	179	09.1	+5	13.8	350	46.5	147	-12	37.0	135	17 34	18 16	19 04	17 07	1	7 08 91		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 11 ^h 16.7 ^m		Mag: -3.9 PMG: 13 ^h 22 ^m			Mag: +1.2 PMG: 10 ^h 57 ^m			Mag: -2.2 PMG: 18 ^h 25 ^m			Mag: +0.9 PMG: 11 ^h 41 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°				
0	190	21.4	159	33.1	+12	05.4	195	32.6	-3	22.7	83	07.0	+22	52.0	184	18.4	+0	17.9
1	205	23.8	174	32.6		06.6	210	33.3		21.9	98	09.3		52.0	199	20.6		18.0
2	220	26.3	189	32.2		07.7	225	34.0		21.1	113	11.6		52.0	214	22.7		18.1
3	235	28.8	204	31.7		08.9	240	34.6		20.3	128	13.9		52.0	229	24.9		18.2
4	250	31.2	219	31.2		10.0	255	35.3		19.5	143	16.2		51.9	244	27.1		18.4
5	265	33.7	234	30.8	+12	11.2	270	36.0	-3	18.8	158	18.4	+22	51.9	259	29.3	+0	18.5
6	280	36.2	249	30.3	+12	12.3	285	36.7	-3	18.0	173	20.7	+22	51.9	274	31.4	+0	18.6
7	295	38.6	264	29.9		13.4	300	37.3		17.2	188	23.0		51.9	289	33.6		18.7
8	310	41.1	279	29.4		14.6	315	38.0		16.4	203	25.3		51.9	304	35.8		18.8
9	325	43.6	294	28.9		15.7	330	38.7		15.6	218	27.5		51.8	319	38.0		19.0
10	340	46.0	309	28.5		16.9	345	39.3		14.8	233	29.8		51.8	334	40.2		19.1
11	355	48.5	324	28.0	+12	18.0	0	40.0	-3	14.1	248	32.1	+22	51.8	349	42.3	+0	19.2
12	10	50.9	339	27.6	+12	19.2	15	40.7	-3	13.3	263	34.4	+22	51.8	4	44.5	+0	19.3
13	25	53.4	354	27.1		20.3	30	41.3		12.5	278	36.7		51.8	19	46.7		19.4
14	40	55.9	9	26.6		21.4	45	42.0		11.7	293	38.9		51.8	34	48.9		19.6
15	55	58.3	24	26.2		22.6	60	42.7		10.9	308	41.2		51.7	49	51.1		19.7
16	71	00.8	39	25.7		23.7	75	43.4		10.1	323	43.5		51.7	64	53.2		19.8
17	86	03.3	54	25.3	+12	24.9	90	44.0	-3	09.4	338	45.8	+22	51.7	79	55.4	+0	19.9
18	101	05.7	69	24.8	+12	26.0	105	44.7	-3	08.6	353	48.0	+22	51.7	94	57.6	+0	20.0
19	116	08.2	84	24.3		27.1	120	45.4		07.8	8	50.3		51.7	109	59.8		20.2
20	131	10.7	99	23.9		28.3	135	46.0		07.0	23	52.6		51.6	125	01.9		20.3
21	146	13.1	114	23.4		29.4	150	46.7		06.2	38	54.9		51.6	140	04.1		20.4
22	161	15.6	129	22.9		30.6	165	47.4		05.4	53	57.1		51.6	155	06.3		20.5
23	176	18.1	144	22.5		31.7	180	48.1		04.7	68	59.4		51.6	170	08.5		20.7
24	191	20.5	159	22.0	+12	32.8	195	48.7	-3	03.9	84	01.7	+22	51.6	185	10.7	+0	20.8
Dif	—		-5		+11	+7		+8	+23		0		+22		+1			

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16 ^h 0 PMG:12 ^h 03.2 ^m			Edad: 14.9 ^d PHE { 4 ^h : 55 ^h /2 12 ^h : 55 ^h /1 20 ^h : 54 ^h /9 PMG: 0 ^h 38 ^m R°: 44 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°		Hora	R°									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m						
0	179	09.1	+5	13.8	350	46.5	148	-12	37.0	133	3	42	4	36	5	19	21	25						
1	194	09.3		14.8	5	20.3	148	-12	50.3	134	3	52		42	23		13	88						
2	209	09.5		15.7	19	54.0	147	-13	03.7	132	4	00		47	26		21	03						
3	224	09.7		16.7	34	27.6	146		16.9	132		08		52	28		20	55						
4	239	09.9		17.6	49	01.3	147		30.1	132		14	4	56	30		47	76						
5	254	10.1	+5	18.6	63	34.9	146	-13	43.2	131	4	20	5	00	5	33	20	40						
6	269	10.3	+5	19.5	78	08.5	146	-13	56.3	131	4	32	5	07	5	37	20	25						
7	284	10.4		20.5	92	42.0	145	-14	09.3	130		41		14	41		12	64						
8	299	10.6		21.5	107	15.5	145		22.2	129		49		19	44		20	02						
9	314	10.8		22.4	121	49.0	145		35.0	128	4	55		23	47		19	53						
10	329	11.0		23.4	136	22.4	144	-14	47.8	128	5	04		30	52		37	54						
11	344	11.2	+5	24.3	150	55.8	144	-15	00.5	127	5	11	5	35	5	56	19	24						
12	359	11.4	+5	25.3	165	29.2	144	-15	13.2	127	5	15	5	39	6	00	19	11						
13	14	11.5		26.2	180	02.5	143		25.8	126		18		43	04		18	59						
14	29	11.7		27.2	194	35.8	143		38.3	125		20		45	08		46	37						
15	44	11.9		28.2	209	09.0	142	-15	50.7	124		20		48	12		31	33						
16	59	12.1		29.1	223	42.2	142	-16	03.1	124		20		49	14		22	30						
17	74	12.3	+5	30.1	238	15.4	142	-16	15.3	122	5	18	5	50	6	17	18	12						
18	89	12.5	+5	31.0	252	48.5	141	-16	27.5	122	5	17	5	51	6	20	18	01						
19	104	12.6		32.0	267	21.5	140		39.7	122		14		51	24		17	47						
20	119	12.8		32.9	281	54.6	141	-16	51.7	120		12		52	25		40	16						
21	134	13.0		33.9	296	27.6	140	-17	03.7	120		11		52	27		33	13						
22	149	13.2		34.8	311	00.5	139		15.6	119		09		52	29		25	10						
23	164	13.4		35.8	325	33.4	139		27.4	118		07		52	31		17	6						
24	179	13.5	+5	36.7	340	06.3	139	-17	39.1	117	5	04	5	52	6	34	17	07						
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 11 ^h 12.8 ^m			Mag: -3.9 PMG: 13 ^h 23 ^m			Mag: +1.2 PMG: 10 ^h 56 ^m			Mag: -2.2 PMG: 18 ^h 21 ^m			Mag: +0.9 PMG: 11 ^h 38 ^m											
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec										
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'								
0	191	20.5	159	22.0	+12	32.8	195	48.7	-3	03.9	84	01.7	+22	51.6	185	10.7	+0	20.8						
1	206	23.0	174	21.6		34.0	210	49.4		03.1	99	03.9		51.5	200	12.8		20.9						
2	221	25.4	189	21.1		35.1	225	50.1		02.3	114	06.2		51.5	215	15.0		21.0						
3	236	27.9	204	20.6		36.2	240	50.8		01.5	129	08.5		51.5	230	17.2		21.1						
4	251	30.4	219	20.2		37.4	255	51.4	-3	00.7	144	10.8		51.5	245	19.4		21.3						
5	266	32.8	234	19.7	+12	38.5	270	52.1	-3	00.0	159	13.0	+22	51.5	260	21.6	+0	21.4						
6	281	35.3	249	19.2	+12	39.6	285	52.8	-2	59.2	174	15.3	+22	51.4	275	23.7	+0	21.5						
7	296	37.8	264	18.8		40.8	300	53.4		58.4	189	17.6		51.4	290	25.9		21.6						
8	311	40.2	279	18.3		41.9	315	54.1		57.6	204	19.8		51.4	305	28.1		21.7						
9	326	42.7	294	17.8		43.0	330	54.8		56.8	219	22.1		51.4	320	30.3		21.9						
10	341	45.2	309	17.4		44.2	345	55.5		56.0	234	24.4		51.4	335	32.4		22.0						
11	356	47.6	324	16.9	+12	45.3	0	56.1	-2	55.3	249	26.7	+22	51.3	350	34.6	+0	22.1						
12	11	50.1	339	16.4	+12	46.4	15	56.8	-2	54.5	264	28.9	+22	51.3	5	36.8	+0	22.2						
13	26	52.5	354	15.9		47.6	30	57.5		53.7	279	31.2		51.3	20	39.0		22.3						
14	41	55.0	9	15.5		48.7	45	58.2		52.9	294	33.5		51.3	35	41.2		22.5						
15	56	57.5	24	15.0		49.8	60	58.8		52.1	309	35.7		51.3	50	43.3		22.6						
16	71	59.9	39	14.5		51.0	75	59.5		51.3	324	38.0		51.2	65	45.5		22.7						
17	87	02.4	54	14.1	+12	52.1	91	00.2	-2	50.6	339	40.3	+22	51.2	80	47.7	+0	22.8						
18	102	04.9	69	13.6	+12	53.2	106	00.8	-2	49.8	354	42.5	+22	51.2	95	49.9	+0	22.9						
19	117	07.3	84	13.1		54.3	121	01.5		49.0	9	44.8		51.2	110	52.1		23.1						
20	132	09.8	99	12.6		55.5	136	02.2		48.2	24	47.1		51.2	125	54.2		23.2						
21	147	12.3	114	12.2		56.6	151	02.9		47.4	39	49.3		51.1	140	56.4		23.3						
22	162	14.7	129	11.7		57.7	166	03.5		46.6	54	51.6		51.1	155	58.6		23.4						
23	177	17.2	144	11.2	+12	58.8	181	04.2		45.9	69	53.9		51.1	171	00.8		23.6						
24	192	19.7	159	10.8	+13	00.0	196	04.9	-2	45.1	84	56.1	+22	51.1	186	02.9	+0	23.7						
Dif	—			-5			+7			+8			+23			0			+22			+1		

UT	SOL			☾ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 0 PMG: 12 ^h 03.0 ^m			Edad: 15.9 ^d SD: 14 ^h 9 PMG: 1 ^h 22 ^m								PHE { 4 ^h : 54 ^h 8 12 ^h : 54 ^h 7 20 ^h : 54 ^h 6 R°: 47 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°		
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	m	h m	m	h m	m		
0	179	13.5	+5 36.7	340	06.3	-17 39.1	117	60 N	18 51	19 35	20 30	22 58	95	5 05	3				
1	194	13.7	37.7	354	39.1	-17 50.8	116	58	47	28	19	41	88	17	9				
2	209	13.9	38.7	9	11.9	-18 02.4	114	56	44	23	10	26	83	28	13				
3	224	14.1	39.6	23	44.6	13.8	114	54	41	18	20 02	14	79	38	16				
4	239	14.3	40.6	38	17.3	25.2	114	52	39	14	19 56	22 03	76	46	20				
5	254	14.5	+5 41.5	52	49.9	-18 36.6	114	50	18 36	19 10	19 50	21 53	73	5 54	22				
6	269	14.6	+5 42.5	67	22.5	-18 47.8	112	45	18 31	19 01	19 37	21 33	68	6 10	27				
7	284	14.8	43.4	81	55.0	-18 58.9	111	40	27	18 55	27	16	65	24	31				
8	299	15.0	44.4	96	27.5	-19 10.0	111	35	24	49	19	21 03	62	36	33				
9	314	15.2	45.3	110	59.9	21.0	110	30	20	45	13	20 51	59	6 46	36				
10	329	15.4	46.3	125	32.3	31.8	108	20	15	37	19 03	31	55	7 03	41				
11	344	15.6	+5 47.2	140	04.6	-19 42.6	108	10 N	18 10	18 32	18 56	20 13	52	7 19	44				
12	359	15.7	+5 48.2	154	36.9	-19 53.3	107	0	18 06	18 27	18 51	19 57	49	7 33	48				
13	14	15.9	49.1	169	09.2	-20 03.9	106	10 S	18 02	23	48	41	45	7 47	52				
14	29	16.1	50.1	183	41.4	14.5	106	20	17 58	20	45	23	43	8 03	55				
15	44	16.3	51.0	198	13.5	24.9	104	30	53	17	45	19 04	38	21	59				
16	59	16.5	52.0	212	45.6	35.2	103	35	50	16	45	18 52	36	31	62				
17	74	16.6	+5 52.9	227	17.6	-20 45.4	102	40	17 47	18 14	18 46	18 39	33	8 43	66				
18	89	16.8	+5 53.9	241	49.6	-20 55.6	102	45	17 44	18 13	18 47	18 24	29	8 58	69				
19	104	17.0	54.8	256	21.5	-21 05.6	100	50	40	12	49	18 05	25	9 15	74				
20	119	17.2	55.8	270	53.4	15.6	100	52	38	12	51	17 56	22	23	77				
21	134	17.4	56.7	285	25.3	25.4	98	54	36	11	52	46	20	33	79				
22	149	17.5	57.7	299	57.0	35.2	98	56	34	11	54	35	16	43	84				
23	164	17.7	58.6	314	28.8	44.8	96	58	31	10	56	23	11	9 55	88				
24	179	17.9	+5 59.6	329	00.5	-21 54.4	96	60 S	17 29	18 10	18 58	17 08	5	10 09	95				
UT	ARIES PMG 11 ^h 08.9 ^m			VENUS Mag: -3.9 PMG: 13 ^h 24 ^m			MARTE Mag: +1.2 PMG: 10 ^h 55 ^m			JÚPITER Mag: -2.2 PMG: 18 ^h 17 ^m			SATURNO Mag: +0.9 PMG: 11 ^h 34 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec	hG ♄	Dec	hG ♅	Dec				
h	° /	° /	° /	° /	° /	° /	° /	°	°	°	°	°	°	°	°	°	°		
0	192	19.7	159 10.8	+13 00.0	196 04.9	-2 45.1	84 56.1	+22 51.1	186 02.9	+0 23.7									
1	207	22.1	174 10.3	+13 01.1	211 05.6	44.3	99 58.4	51.1	201 05.1	23.8									
2	222	24.6	189 09.8	02.2	226 06.2	43.5	115 00.7	51.0	216 07.3	23.9									
3	237	27.0	204 09.3	03.3	241 06.9	42.7	130 02.9	51.0	231 09.5	24.0									
4	252	29.5	219 08.9	04.5	256 07.6	41.9	145 05.2	51.0	246 11.7	24.2									
5	267	32.0	234 08.4	+13 05.6	271 08.3	-2 41.1	160 07.5	+22 51.0	261 13.8	+0 24.3									
6	282	34.4	249 07.9	+13 06.7	286 08.9	-2 40.4	175 09.7	+22 51.0	276 16.0	+0 24.4									
7	297	36.9	264 07.4	07.8	301 09.6	39.6	190 12.0	50.9	291 18.2	24.5									
8	312	39.4	279 07.0	08.9	316 10.3	38.8	205 14.2	50.9	306 20.4	24.6									
9	327	41.8	294 06.5	10.1	331 11.0	38.0	220 16.5	50.9	321 22.6	24.8									
10	342	44.3	309 06.0	11.2	346 11.6	37.2	235 18.8	50.9	336 24.7	24.9									
11	357	46.8	324 05.5	+13 12.3	1 12.3	-2 36.4	250 21.0	+22 50.9	351 26.9	+0 25.0									
12	12	49.2	339 05.0	+13 13.4	16 13.0	-2 35.7	265 23.3	+22 50.8	6 29.1	+0 25.1									
13	27	51.7	354 04.6	14.5	31 13.6	34.9	280 25.6	50.8	21 31.3	25.2									
14	42	54.1	9 04.1	15.6	46 14.3	34.1	295 27.8	50.8	36 33.4	25.4									
15	57	56.6	24 03.6	16.8	61 15.0	33.3	310 30.1	50.8	51 35.6	25.5									
16	72	59.1	39 03.1	17.9	76 15.7	32.5	325 32.3	50.8	66 37.8	25.6									
17	88	01.5	54 02.6	+13 19.0	91 16.3	-2 31.7	340 34.6	+22 50.7	81 40.0	+0 25.7									
18	103	04.0	69 02.2	+13 20.1	106 17.0	-2 31.0	355 36.9	+22 50.7	96 42.2	+0 25.8									
19	118	06.5	84 01.7	21.2	121 17.7	30.2	10 39.1	50.7	111 44.3	26.0									
20	133	08.9	99 01.2	22.3	136 18.4	29.4	25 41.4	50.7	126 46.5	26.1									
21	148	11.4	114 00.7	23.4	151 19.0	28.6	40 43.6	50.7	141 48.7	26.2									
22	163	13.9	129 00.2	24.6	166 19.7	27.8	55 45.9	50.6	156 50.9	26.3									
23	178	16.3	143 59.8	25.7	181 20.4	27.0	70 48.2	50.6	171 53.1	26.4									
24	193	18.8	158 59.3	+13 26.8	196 21.1	-2 26.2	85 50.4	+22 50.6	186 55.2	+0 26.6									
Dif	—	—	-5	+11	+7	+8	+23	0	+22	+1									

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'0 PMG:12 ^h 02.7 ^m			Edad: 16.9 ^d SD: 14'9 PMG: 2 ^h 08 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	179	17.9	+5	59.6	329	00.5	126	-21	54.4	94	3	35	4	30	5	13	**	**	**
1	194	18.1	+6	00.5	343	32.1	126	-22	03.8	94	45	36	17	**	**	**		25	12
2	209	18.3		01.5	358	03.7	125		13.2	92	3	54	42	20	23	48	75	40	18
3	224	18.4		02.4	12	35.2	125		22.4	91	4	02	47	23	31	72	5	53	20
4	239	18.6		03.4	27	06.7	125		31.5	91	09	51	26	17	69		6	04	25
5	254	18.8	+6	04.3	41	38.1	124	-22	40.6	91	4	15	4	55	5	28	23	05	67
6	269	19.0	+6	05.3	56	09.4	123	-22	49.5	89	4	28	5	04	5	34	22	40	63
7	284	19.2		06.2	70	40.8	124	-22	58.3	88	38	10	38	20	60	6	53	35	
8	299	19.3		07.2	85	12.0	122	-23	07.1	88	46	16	42	22	03	59	7	08	37
9	314	19.5		08.1	99	43.2	122		15.7	86	4	52	21	45	21	49	57	21	39
10	329	19.7		09.1	114	14.4	122		24.2	85	5	02	28	50	25	54	7	43	43
11	344	19.9	+6	10.0	128	45.5	121	-23	32.6	84	5	09	5	34	5	55	21	04	51
12	359	20.1	+6	11.0	143	16.5	120	-23	40.9	83	5	14	5	39	5	59	20	44	50
13	14	20.2		11.9	157	47.5	120		49.0	81	18	43	6	04	25	47	37	52	
14	29	20.4		12.9	172	18.5	120	-23	57.1	81	20	46	08	20	04	45	8	57	54
15	44	20.6		13.8	186	49.4	119	-24	05.1	80	21	49	13	19	41	42	9	19	57
16	59	20.8		14.8	201	20.2	118		12.9	78	21	50	16	27	40		32	60	
17	74	21.0	+6	15.7	215	51.0	118	-24	20.7	78	5	20	5	52	6	19	19	11	38
18	89	21.1	+6	16.7	230	21.8	118	-24	28.3	76	5	19	5	53	6	22	18	52	35
19	104	21.3		17.6	244	52.5	117		35.8	75	17	54	27	28	32		28	70	
20	119	21.5		18.6	259	23.1	116		43.2	74	16	55	29	17	29		39	72	
21	134	21.7		19.5	273	53.7	116		50.4	72	14	55	31	18	04	26	10	51	75
22	149	21.9		20.5	288	24.3	116	-24	57.6	72	13	56	33	17	50	22	11	05	79
23	164	22.0		21.4	302	54.8	115	-25	04.6	70	11	56	36	32	18		22	84	
24	179	22.2	+6	22.3	317	25.2	114	-25	11.6	70	5	09	5	57	6	39	17	12	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 04.9 ^m		Mag: -3.9 PMG: 13 ^h 24 ^m		Mag: +1.2 PMG: 10 ^h 54 ^m		Mag: -2.2 PMG: 18 ^h 14 ^m		Mag: +0.9 PMG: 11 ^h 31 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	193	18.8	158	59.3	+13	26.8	196	21.1	-2	26.2
1	208	21.3	173	58.8		27.9	211	21.8		25.5
2	223	23.7	188	58.3		29.0	226	22.4		24.7
3	238	26.2	203	57.8		30.1	241	23.1		23.9
4	253	28.6	218	57.3		31.2	256	23.8		23.1
5	268	31.1	233	56.9	+13	32.3	271	24.5	-2	22.3
6	283	33.6	248	56.4	+13	33.4	286	25.1	-2	21.5
7	298	36.0	263	55.9		34.5	301	25.8		20.8
8	313	38.5	278	55.4		35.6	316	26.5		20.0
9	328	41.0	293	54.9		36.7	331	27.2		19.2
10	343	43.4	308	54.4		37.8	346	27.8		18.4
11	358	45.9	323	53.9	+13	39.0	1	28.5	-2	17.6
12	13	48.4	338	53.5	+13	40.1	16	29.2	-2	16.8
13	28	50.8	353	53.0		41.2	31	29.9		16.0
14	43	53.3	8	52.5		42.3	46	30.5		15.3
15	58	55.8	23	52.0		43.4	61	31.2		14.5
16	73	58.2	38	51.5		44.5	76	31.9		13.7
17	89	00.7	53	51.0	+13	45.6	91	32.6	-2	12.9
18	104	03.1	68	50.5	+13	46.7	106	33.2	-2	12.1
19	119	05.6	83	50.0		47.8	121	33.9		11.3
20	134	08.1	98	49.5		48.9	136	34.6		10.6
21	149	10.5	113	49.1		50.0	151	35.3		09.8
22	164	13.0	128	48.6		51.1	166	36.0		09.0
23	179	15.5	143	48.1		52.2	181	36.6		08.2
24	194	17.9	158	47.6	+13	53.3	196	37.3	-2	07.4
Dif	—		-5		+11		+7		+8	

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 02.4 ^m			Edad: 17.9 ^d SD: 14'8 PMG: 2 ^h 56 ^m PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2 Rº: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	Rº	Hora	Rº	
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	h m	h m	h m	h m		
0	179	22.2	+6	22.3	317	25.2	115	-25	11.6	68	60 N	18 56	19 40	20 36	0 32	91	5 12	16
1	194	22.4		23.3	331	55.7	113		18.4	67	58	52	33	25	0 07	82	37	25
2	209	22.6		24.2	346	26.0	113		25.1	65	56	48	27	15	**	**	5 58	29
3	224	22.8		25.2	0	56.3	113		31.6	65	54	45	22	07	**	**	6 14	33
4	239	22.9		26.1	15	26.6	113		38.1	65	52	42	17	20 00	**	**	29	35
5	254	23.1	+6	27.1	29	56.8	112	-25	44.4	63	50	18 40	19 13	19 53	**	**	6 41	38
6	269	23.3	+6	28.0	44	27.0	112	-25	50.6	62	45	18 34	19 04	19 40	23 43	59	7 07	41
7	284	23.5		29.0	58	57.1	111	-25	56.7	61	40	29	18 57	30	20	58	28	43
8	299	23.6		29.9	73	27.2	111	-26	02.7	60	35	25	51	21	23 02	56	7 45	45
9	314	23.8		30.8	87	57.2	110		08.5	58	30	22	46	14	22 46	55	8 00	46
10	329	24.0		31.8	102	27.2	110		14.3	58	20	16	38	19 04	22 19	54	26	48
11	344	24.2	+6	32.7	116	57.1	109	-26	19.9	56	10 N	18 10	18 32	18 56	21 55	54	8 48	50
12	359	24.4	+6	33.7	131	27.1	110	-26	25.3	54	0	18 06	18 26	18 51	21 34	52	9 08	52
13	14	24.5		34.6	145	56.9	108		30.7	52	10 S	18 01	22	47	21 12	52	29	53
14	29	24.7		35.6	160	26.7	108		35.9	51	20	17 56	18	44	20 49	51	9 51	55
15	44	24.9		36.5	174	56.5	108		41.0	50	30	51	15	42	23	49	10 16	58
16	59	25.1		37.5	189	26.3	108		46.0	50	35	48	13	42	20 07	48	32	58
17	74	25.2	+6	38.4	203	56.0	107	-26	50.8	48	40	17 44	18 11	18 43	19 49	47	10 49	60
18	89	25.4	+6	39.3	218	25.6	106	-26	55.5	47	45	17 40	18 10	18 44	19 27	45	11 11	62
19	104	25.6		40.3	232	55.3	107	-27	00.1	46	50	36	08	45	19 00	42	38	64
20	119	25.8		41.2	247	24.8	105		04.6	45	52	33	07	46	18 46	41	11 51	66
21	134	25.9		42.2	261	54.4	106		08.9	43	54	31	07	47	30	40	12 06	68
22	149	26.1		43.1	276	23.9	105		13.1	42	56	29	06	49	18 12	37	24	71
23	164	26.3		44.0	290	53.4	105		17.2	41	58	26	05	50	17 50	33	12 46	75
24	179	26.5	+6	45.0	305	22.9	105	-27	21.1	39	60 S	17 23	18 04	18 52	17 21	26	13 15	82

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 11 ^h 01.0 ^m		Mag: -3.9 PMG: 13 ^h 25 ^m		Mag: +1.2 PMG: 10 ^h 53 ^m		Mag: -2.2 PMG: 18 ^h 10 ^m		Mag: +0.9 PMG: 11 ^h 27 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /								
0	194	17.9	158	47.6	+13	53.3	196	37.3	-2	07.4	86	44.5	+22	50.1	187	47.5	+0	29.4
1	209	20.4	173	47.1		54.4	211	38.0		06.6	101	46.8		50.0	202	49.7		29.6
2	224	22.9	188	46.6		55.5	226	38.7		05.8	116	49.0		50.0	217	51.9		29.7
3	239	25.3	203	46.1		56.5	241	39.3		05.1	131	51.3		50.0	232	54.1		29.8
4	254	27.8	218	45.6		57.6	256	40.0		04.3	146	53.5		50.0	247	56.3		29.9
5	269	30.2	233	45.1	+13	58.7	271	40.7	-2	03.5	161	55.8	+22	50.0	262	58.4	+0	30.0
6	284	32.7	248	44.6	+13	59.8	286	41.4	-2	02.7	176	58.0	+22	49.9	278	00.6	+0	30.2
7	299	35.2	263	44.1	+14	00.9	301	42.0		01.9	192	00.3		49.9	293	02.8		30.3
8	314	37.6	278	43.6		02.0	316	42.7		01.1	207	02.5		49.9	308	05.0		30.4
9	329	40.1	293	43.1		03.1	331	43.4	-2	00.4	222	04.8		49.9	323	07.2		30.5
10	344	42.6	308	42.6		04.2	346	44.1	-1	59.6	237	07.0		49.8	338	09.3		30.6
11	359	45.0	323	42.1	+14	05.3	1	44.8	-1	58.8	252	09.2	+22	49.8	353	11.5	+0	30.8
12	14	47.5	338	41.6	+14	06.4	16	45.4	-1	58.0	267	11.5	+22	49.8	8	13.7	+0	30.9
13	29	50.0	353	41.2		07.5	31	46.1		57.2	282	13.7		49.8	23	15.9		31.0
14	44	52.4	8	40.7		08.6	46	46.8		56.4	297	16.0		49.8	38	18.1		31.1
15	59	54.9	23	40.2		09.6	61	47.5		55.6	312	18.2		49.7	53	20.2		31.2
16	74	57.4	38	39.7		10.7	76	48.1		54.9	327	20.5		49.7	68	22.4		31.4
17	89	59.8	53	39.2	+14	11.8	91	48.8	-1	54.1	342	22.7	+22	49.7	83	24.6	+0	31.5
18	105	02.3	68	38.7	+14	12.9	106	49.5	-1	53.3	357	25.0	+22	49.7	98	26.8	+0	31.6
19	120	04.7	83	38.2		14.0	121	50.2		52.5	12	27.2		49.6	113	29.0		31.7
20	135	07.2	98	37.7		15.1	136	50.9		51.7	27	29.5		49.6	128	31.1		31.8
21	150	09.7	113	37.2		16.2	151	51.5		50.9	42	31.7		49.6	143	33.3		32.0
22	165	12.1	128	36.7		17.2	166	52.2		50.1	57	33.9		49.6	158	35.5		32.1
23	180	14.6	143	36.2		18.3	181	52.9		49.4	72	36.2		49.5	173	37.7		32.2
24	195	17.1	158	35.7	+14	19.4	196	53.6	-1	48.6	87	38.4	+22	49.5	188	39.9	+0	32.3
Dif	—		-5		+11		+7		+8		+22		0		+22		+	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG:12 ^h 02.1 ^m			Edad: 18.9 ^d PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2 R°: 51 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	m
0	179	26.5	+6	45.0	305	22.9	104	-27	21.1	39	60 N	3 27	4 23	5 07	2 02	70	5 27 36
1	194	26.7		45.9	319	52.3	103		25.0	30	58	39	30	11	1 28	64	6 01 41
2	209	26.8		46.9	334	21.6	103		28.6	36	56	48	36	15	1 03	62	26 44
3	224	27.0		47.8	348	51.0	104		32.2	36	54	3 57	42	18	0 43	61	6 46 45
4	239	27.2		48.7	3	20.3	103		35.6	34	52	4 04	47	21	26	60	7 03 46
5	254	27.4	+6	49.7	17	49.6	103	-27	38.9	33	50	4 11	4 51	5 24	0 12	59	7 17 47
6	269	27.5	+6	50.6	32	18.9	103	-27	42.1	32	45	4 24	5 00	5 30	** ** *		7 46 49
7	284	27.7		51.6	46	48.1	102		45.1	30	40	34	07	35	** ** *		8 10 49
8	299	27.9		52.5	61	17.3	102		48.0	29	35	43	13	39	23 57	50	29 49
9	314	28.1		53.4	75	46.5	102		50.7	27	30	4 50	18	42	40 50		8 45 50
10	329	28.2		54.4	90	15.7	102		53.4	27	20	5 00	26	49	23 12	51	9 13 50
11	344	28.4	+6	55.3	104	44.8	101	-27	55.8	24	10 N	5 08	5 33	5 54	22 48	51	9 36 51
12	359	28.6	+6	56.3	119	13.9	101	-27	58.2	24	0	5 14	5 38	5 59	22 25	52	9 58 52
13	14	28.8		57.2	133	43.0	101	-28	00.4	22	10 S	18	42	6 04	22 03	51	10 21 51
14	29	28.9		58.1	148	12.1	101		02.5	20	20	21	46	09	21 38	53	10 45 52
15	44	29.1	+6	59.1	162	41.1	100		04.5	20	30	22	50	14	21 10	53	11 12 53
16	59	29.3	+7	00.0	177	10.1	100		06.3	18	35	23	52	17	20 54	52	29 52
17	74	29.5	+7	01.0	191	39.1	100	-28	08.0	17	40	5 22	5 54	6 21	20 34	53	11 48 53
18	89	29.6	+7	01.9	206	08.1	100	-28	09.5	15	45	5 22	5 56	6 25	20 11	53	12 11 53
19	104	29.8		02.8	220	37.1	100		10.9	14	50	20	57	30	19 41	53	41 53
20	119	30.0		03.8	235	06.1	100		12.2	13	52	19	58	32	26 53		12 56 53
21	134	30.2		04.7	249	35.0	99		13.3	11	54	18	5 59	34	19 09	53	13 13 53
22	149	30.3		05.6	264	03.9	99		14.3	10	56	17	6 00	37	18 48	53	13 34 53
23	164	30.5		06.6	278	32.9	100		15.2	9	58	15	01	40	18 22	53	14 00 53
24	179	30.7	+7	07.5	293	01.8	99	-28	15.9	7	60 S	5 13	6 02	6 43	17 45	54	14 36 54

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 57.1 ^m		Mag: -3.9 PMG: 13 ^h 26 ^m		Mag: +1.2 PMG: 10 ^h 52 ^m		Mag: -2.2 PMG: 18 ^h 07 ^m		Mag: +0.9 PMG: 11 ^h 24 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	195	17.1	158	35.7	+14	19.4	196	53.6	-1	48.6	87	38.4	+22	49.5	188	39.9	+0	32.3
1	210	19.5	173	35.2		20.5	211	54.3		47.8	102	40.7		49.5	203	42.0		32.4
2	225	22.0	188	34.7		21.6	226	54.9		47.0	117	42.9		49.5	218	44.2		32.6
3	240	24.5	203	34.2		22.7	241	55.6		46.2	132	45.2		49.5	233	46.4		32.7
4	255	26.9	218	33.6		23.7	256	56.3		45.4	147	47.4		49.4	248	48.6		32.8
5	270	29.4	233	33.1	+14	24.8	271	57.0	-1	44.7	162	49.6	+22	49.4	263	50.8	+0	32.9
6	285	31.9	248	32.6	+14	25.9	286	57.6	-1	43.9	177	51.9	+22	49.4	278	52.9	+0	33.0
7	300	34.3	263	32.1		27.0	301	58.3		43.1	192	54.1		49.4	293	55.1		33.2
8	315	36.8	278	31.6		28.1	316	59.0		42.3	207	56.4		49.3	308	57.3		33.3
9	330	39.2	293	31.1		29.1	331	59.7		41.5	222	58.6		49.3	323	59.5		33.4
10	345	41.7	308	30.6		30.2	347	00.4		40.7	238	00.8		49.3	339	01.7		33.5
11	0	44.2	323	30.1	+14	31.3	2	01.0	-1	39.9	253	03.1	+22	49.3	354	03.8	+0	33.6
12	15	46.6	338	29.6	+14	32.4	17	01.7	-1	39.2	268	05.3	+22	49.2	9	06.0	+0	33.8
13	30	49.1	353	29.1		33.4	32	02.4		38.4	283	07.6		49.2	24	08.2		33.9
14	45	51.6	8	28.6		34.5	47	03.1		37.6	298	09.8		49.2	39	10.4		34.0
15	60	54.0	23	28.1		35.6	62	03.8		36.8	313	12.0		49.2	54	12.6		34.1
16	75	56.5	38	27.6		36.7	77	04.4		36.0	328	14.3		49.1	69	14.7		34.2
17	90	59.0	53	27.1	+14	37.7	92	05.1	-1	35.2	343	16.5	+22	49.1	84	16.9	+0	34.4
18	106	01.4	68	26.6	+14	38.8	107	05.8	-1	34.4	358	18.8	+22	49.1	99	19.1	+0	34.5
19	121	03.9	83	26.1		39.9	122	06.5		33.7	13	21.0		49.1	114	21.3		34.6
20	136	06.4	98	25.5		40.9	137	07.2		32.9	28	23.2		49.1	129	23.5		34.7
21	151	08.8	113	25.0		42.0	152	07.8		32.1	43	25.5		49.0	144	25.6		34.8
22	166	11.3	128	24.5		43.1	167	08.5		31.3	58	27.7		49.0	159	27.8		34.9
23	181	13.7	143	24.0		44.1	182	09.2		30.5	73	29.9		49.0	174	30.0		35.1
24	196	16.2	158	23.5	+14	45.2	197	09.9	-1	29.7	88	32.2	+22	49.0	189	32.2	+0	35.2
Dif	—		-5		+11		+7		+8		+22		0		+22		+1	

UT	SOL			LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG:12 ^h 01.8 ^m			Edad: 19.9 ^d SD: 14 ^h 8 PMG: 4 ^h 37 ^m						Civil			Náutico		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	° /	° /	° /	° /		° /		°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	179 30.7	+7 07.5	293 01.8	99	−28	15.9	6	60 N	19 01	19 45	20 43	3 12 38	6 03 72			
1	194 30.9	08.4	307 30.7	99		16.5	5	58	18 56	38	31	2 32 44	6 42 67			
2	209 31.0	09.4	321 59.6	99		17.0	3	56	52	32	20	2 05 46	7 10 64			
3	224 31.2	10.3	336 28.4	98		17.3	3	54	49	26	11	1 44 47	31 62			
4	239 31.4	11.3	350 57.3	99		17.5	2	52	46	21	20 04	26 48	7 49 61			
5	254 31.5	+7 12.2	5 26.2	99	−28	17.5	0	50	18 43	19 16	19 57	1 11 49	8 04 60			
6	269 31.7	+7 13.1	19 55.0	98	−28	17.4	1	45	18 36	19 07	19 43	0 40 50	8 35 58			
7	284 31.9	14.1	34 23.9	99		17.2	2	40	31	18 59	32	0 16 51	8 59 57			
8	299 32.1	15.0	48 52.8	99		16.8	4	35	27	53	23	** ** *	9 18 57			
9	314 32.2	15.9	63 21.6	98		16.3	5	30	23	47	16	** ** *	9 35 56			
10	329 32.4	16.9	77 50.5	99		15.7	6	20	16	38	19 05	** ** *	10 03 55			
11	344 32.6	+7 17.8	92 19.3	98	−28	14.9	8	10 N	18 10	18 32	18 56	23 39 51	10 27 54			
12	359 32.8	+7 18.7	106 48.2	99	−28	14.0	9	0	18 05	18 26	18 50	23 17 52	10 50 53			
13	14 32.9	19.7	121 17.1	99		12.9	11	10 S	18 00	21	46	22 54 54	11 12 52			
14	29 33.1	20.6	135 45.9	98		11.8	11	20	17 54	17	42	31 55	11 37 50			
15	44 33.3	21.5	150 14.8	99		10.4	14	30	48	12	40	22 03 58	12 05 49			
16	59 33.4	22.5	164 43.7	99		09.0	14	35	45	10	40	21 46 59	21 49			
17	74 33.6	+7 23.4	179 12.6	99	−28	07.4	16	40	17 41	18 08	18 40	21 27 61	12 41 47			
18	89 33.8	+7 24.3	193 41.5	99	−28	05.6	18	45	17 37	18 06	18 40	21 04 62	13 04 46			
19	104 34.0	25.3	208 10.4	99		03.8	18	50	31	04	41	20 34 65	34 43			
20	119 34.1	26.2	222 39.3	99	−28	01.7	21	52	29	03	42	19 67	13 49 42			
21	134 34.3	27.1	237 08.2	99	−27	59.6	21	54	26	02	43	20 02 69	14 06 40			
22	149 34.5	28.1	251 37.1	99		57.3	23	56	23	01	44	19 41 72	27 38			
23	164 34.6	29.0	266 06.1	100		54.9	24	58	20	18 00	45	19 15 76	14 53 34			
24	179 34.8	+7 29.9	280 35.0	99	−27	52.3	26	60 S	17 17	17 58	18 46	18 39 83	15 30 26			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 53.1 ^m		Mag: −3.9 PMG: 13 ^h 27 ^m		Mag: +1.2 PMG: 10 ^h 51 ^m		Mag: −2.1 PMG: 18 ^h 03 ^m		Mag: +0.9 PMG: 11 ^h 20 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	196 16.2	158 23.5	+14 45.2	197 09.9	−1 29.7	88 32.2	+22 49.0	189 32.2	+0 35.2	
1	211 18.7	173 23.0	46.3	212 10.6	29.0	103 34.4	48.9	204 34.4	35.3	
2	226 21.1	188 22.5	47.4	227 11.2	28.2	118 36.6	48.9	219 36.5	35.4	
3	241 23.6	203 22.0	48.4	242 11.9	27.4	133 38.9	48.9	234 38.7	35.5	
4	256 26.1	218 21.4	49.5	257 12.6	26.6	148 41.1	48.9	249 40.9	35.7	
5	271 28.5	233 20.9	+14 50.5	272 13.3	−1 25.8	163 43.4	+22 48.8	264 43.1	+0 35.8	
6	286 31.0	248 20.4	+14 51.6	287 14.0	−1 25.0	178 45.6	+22 48.8	279 45.3	+0 35.9	
7	301 33.5	263 19.9	52.7	302 14.6	24.2	193 47.8	48.8	294 47.4	36.0	
8	316 35.9	278 19.4	53.7	317 15.3	23.5	208 50.1	48.8	309 49.6	36.1	
9	331 38.4	293 18.9	54.8	332 16.0	22.7	223 52.3	48.7	324 51.8	36.3	
10	346 40.8	308 18.4	55.9	347 16.7	21.9	238 54.5	48.7	339 54.0	36.4	
11	1 43.3	323 17.8	+14 56.9	2 17.4	−1 21.1	253 56.8	+22 48.7	354 56.2	+0 36.5	
12	16 45.8	338 17.3	+14 58.0	17 18.0	−1 20.3	268 59.0	+22 48.7	9 58.3	+0 36.6	
13	31 48.2	353 16.8	+14 59.0	32 18.7	19.5	284 01.2	48.6	25 00.5	36.7	
14	46 50.7	8 16.3	+15 00.1	47 19.4	18.7	299 03.4	48.6	40 02.7	36.9	
15	61 53.2	23 15.8	01.2	62 20.1	18.0	314 05.7	48.6	55 04.9	37.0	
16	76 55.6	38 15.3	02.2	77 20.8	17.2	329 07.9	48.6	70 07.1	37.1	
17	91 58.1	53 14.7	+15 03.3	92 21.4	−1 16.4	344 10.1	+22 48.5	85 09.2	+0 37.2	
18	107 00.6	68 14.2	+15 04.3	107 22.1	−1 15.6	359 12.4	+22 48.5	100 11.4	+0 37.3	
19	122 03.0	83 13.7	05.4	122 22.8	14.8	14 14.6	48.5	115 13.6	37.4	
20	137 05.5	98 13.2	06.4	137 23.5	14.0	29 16.8	48.5	130 15.8	37.6	
21	152 08.0	113 12.7	07.5	152 24.2	13.3	44 19.1	48.4	145 18.0	37.7	
22	167 10.4	128 12.1	08.6	167 24.9	12.5	59 21.3	48.4	160 20.2	37.8	
23	182 12.9	143 11.6	09.6	182 25.5	11.7	74 23.5	48.4	175 22.3	37.9	
24	197 15.3	158 11.1	+15 10.7	197 26.2	−1 10.9	89 25.7	+22 48.4	190 24.5	+0 38.0	
Dif	—	−5	+11	+7	+8	+22	0	+22	+1	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16 ^h 0 PMG:12 ^h 01.5 ^m			Edad: 20.9 ^d SD: 14 ^h 8 PMG: 5 ^h 29 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora	R°	Hora	R°				
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	179	34.8	+7	29.9	280	35.0	-27	52.3	60 N	3	20	4	17	5	01	3	49	15	
1	194	35.0		30.8	295	04.0		49.6	58	32	24		06	3	15	23	7	47	
2	209	35.2		31.8	309	33.0		46.8	56	42	31		10	2	50	28	8	12	
3	224	35.3		32.7	324	02.0		43.8	54	51	37		14		30	32		32	
4	239	35.5		33.6	338	31.0		40.7	52	3	59		42	17	2	13	34	8	
5	254	35.7	+7	34.6	353	00.0	-27	37.5	50	4	06	4	46	5	20	1	58	37	
6	269	35.8	+7	35.5	7	29.1	-27	34.1	45	4	20	4	56	5	26	1	29	40	
7	284	36.0		36.4	21	58.2		30.6	40	31	5	04	32	1	06	42	9	55	
8	299	36.2		37.4	36	27.3		27.0	35	40	10		36	0	47	44	10	13	
9	314	36.4		38.3	50	56.4		23.2	30	47	16		40	3	30	46		29	
10	329	36.5		39.2	65	25.6		19.3	20	4	59	25	47	0	03	47	10	57	
11	344	36.7	+7	40.1	79	54.7	-27	15.3	10 N	5	07	5	32	5	53	**	**	**	
12	359	36.9	+7	41.1	94	23.9	-27	11.1	0	5	13	5	37	5	58	**	**	**	
13	14	37.0		42.0	108	53.1		06.8	10 S	18		42	6	04	23	47	52		
14	29	37.2		42.9	123	22.4	-27	02.4	20	21		47	09	23	25	55		26	
15	44	37.4		43.9	137	51.7	-26	57.8	30	24		51	15	22	59	59	12	52	
16	59	37.5		44.8	152	20.9		53.1	35	24		53	19		44	61	13	08	
17	74	37.7	+7	45.7	166	50.3	-26	48.2	40	5	24	5	56	6	23	22	26	64	
18	89	37.9	+7	46.6	181	19.6	-26	43.3	45	5	24	5	58	6	27	22	05	67	
19	104	38.0		47.6	195	49.0		38.2	50	23		6	00	33	21	38	71	14	
20	119	38.2		48.5	210	18.4		32.9	52	22		01	35	25	73		29	30	
21	134	38.4		49.4	224	47.9		27.6	54	22		03	38	21	09	77	14	45	
22	149	38.6		50.3	239	17.3		22.1	56	21		04	41	20	51	81	15	03	
23	164	38.7		51.3	253	46.9		16.5	58	19		05	44	29	86		26	17	
24	179	38.9	+7	52.2	268	16.4	-26	10.7	60 S	5	18	6	06	6	48	20	01	94	

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 10 ^h 49.2 ^m			Mag: -3.9 PMG: 13 ^h 28 ^m			Mag: +1.2 PMG: 10 ^h 50 ^m			Mag: -2.1 PMG: 18 ^h 00 ^m			Mag: +0.9 PMG: 11 ^h 17 ^m					
	hG ♀	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°			
0	197	15.3	158	11.1	+15	10.7	197	26.2	-1	10.9	89	25.7	+22	48.4	190	24.5	+0	38.0
1	212	17.8	173	10.6		11.7	212	26.9		10.1	104	28.0		48.3	205	26.7		38.2
2	227	20.3	188	10.1		12.8	227	27.6		09.3	119	30.2		48.3	220	28.9		38.3
3	242	22.7	203	09.5		13.8	242	28.3		08.5	134	32.4		48.3	235	31.1		38.4
4	257	25.2	218	09.0		14.9	257	28.9		07.8	149	34.7		48.3	250	33.2		38.5
5	272	27.7	233	08.5	+15	15.9	272	29.6	-1	07.0	164	36.9	+22	48.2	265	35.4	+0	38.6
6	287	30.1	248	08.0	+15	17.0	287	30.3	-1	06.2	179	39.1	+22	48.2	280	37.6	+0	38.8
7	302	32.6	263	07.4		18.0	302	31.0		05.4	194	41.3		48.2	295	39.8		38.9
8	317	35.1	278	06.9		19.1	317	31.7		04.6	209	43.6		48.2	310	42.0		39.0
9	332	37.5	293	06.4		20.1	332	32.4		03.8	224	45.8		48.1	325	44.1		39.1
10	347	40.0	308	05.9		21.2	347	33.0		03.0	239	48.0		48.1	340	46.3		39.2
11	2	42.5	323	05.3	+15	22.2	2	33.7	-1	02.3	254	50.2	+22	48.1	355	48.5	+0	39.4
12	17	44.9	338	04.8	+15	23.2	17	34.4	-1	01.5	269	52.5	+22	48.1	10	50.7	+0	39.5
13	32	47.4	353	04.3		24.3	32	35.1	-1	00.7	284	54.7		48.0	25	52.9		39.6
14	47	49.8	8	03.8		25.3	47	35.8	-0	59.9	299	56.9		48.0	40	55.1		39.7
15	62	52.3	23	03.2		26.4	62	36.4		59.1	314	59.1		48.0	55	57.2		39.8
16	77	54.8	38	02.7		27.4	77	37.1		58.3	330	01.4		48.0	70	59.4		39.9
17	92	57.2	53	02.2	+15	28.5	92	37.8	-0	57.6	345	03.6	+22	47.9	86	01.6	+0	40.1
18	107	59.7	68	01.6	+15	29.5	107	38.5	-0	56.8	0	05.8	+22	47.9	101	03.8	+0	40.2
19	123	02.2	83	01.1		30.5	122	39.2		56.0	15	08.0		47.9	116	06.0		40.3
20	138	04.6	98	00.6		31.6	137	39.9		55.2	30	10.3		47.9	131	08.1		40.4
21	153	07.1	113	00.1		32.6	152	40.5		54.4	45	12.5		47.8	146	10.3		40.5
22	168	09.6	127	59.5		33.7	167	41.2		53.6	60	14.7		47.8	161	12.5		40.7
23	183	12.0	142	59.0		34.7	182	41.9		52.8	75	16.9		47.8	176	14.7		40.8
24	198	14.5	157	58.5	+15	35.7	197	42.6	-0	52.1	90	19.1	+22	47.8	191	16.9	+0	40.9
Dif	—		-5	+10			+7	+8			+22	0			+22	+1		

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16'0 PMG:12 ^h 01.3 ^m			Edad: 21.9 ^d SD: 14'9 PMG: 6 ^h 20 ^m			PHE { 4 ^h : 54'8 12 ^h : 55'0 20 ^h : 55'1 R°: 50 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m					
0	179	38.9	+7	52.2	268	16.4	-26	10.7	58	60 N	19	06	19	51	20	49	4	04	7	8	44	98
1	194	39.1		53.1	282	46.0	-26	04.9	60	58	19	01		43	36	3	38	15	9	09	90	
2	209	39.2		54.1	297	15.6	-25	58.9	60	56	18	56		36	25	18	20		28	85		
3	224	39.4		55.0	311	45.2		52.7	62	54		53		30	16	3	02	23	45	81		
4	239	39.6		55.9	326	14.9		46.5	62	52		49		24	08	2	47	27	9	59	77	
5	254	39.7	+7	56.8	340	44.6	-25	40.1	64	50	18	46	19	20	20	01	2	35	28	10	11	75
6	269	39.9	+7	57.8	355	14.3	-25	33.6	65	45	18	39	19	09	19	46	2	09	33	10	36	70
7	284	40.1		58.7	9	44.1		26.9	67	40		33	19	01	34	1	48	37	10	56	67	
8	299	40.2	+7	59.6	24	13.9		20.2	67	35		28	18	54	25	31	39		11	13	63	
9	314	40.4	+8	00.5	38	43.8		13.3	69	30		24		48	17	1	16	41		27	61	
10	329	40.6		01.4	53	13.7	-25	06.3	70	20		17	39	19	05	0	50	45	11	51	57	
11	344	40.7	+8	02.4	67	43.6	-24	59.1	72	10 N	18	10	18	32	18	56	0	28	48	12	12	54
12	359	40.9	+8	03.3	82	13.6	-24	51.9	72	0	18	05	18	25	18	50	0	08	51	12	32	50
13	14	41.1		04.2	96	43.6		44.5	74	10 S	17	59		20	45	**	**	**		12	51	47
14	29	41.2		05.1	111	13.6		37.0	75	20		53		15	41	**	**	**		13	12	43
15	44	41.4		06.1	125	43.7		29.4	76	30		46		10	38	23	58	61		35	40	
16	59	41.6		07.0	140	13.8		21.6	78	35		42		08	37		45	64		13	49	37
17	74	41.7	+8	07.9	154	44.0	-24	13.7	79	40	17	38	18	05	18	37	23	30	67	14	05	34
18	89	41.9	+8	08.8	169	14.2	-24	05.8	79	45	17	33	18	03	18	37	23	12	71	14	24	30
19	104	42.1		09.7	183	44.4	-23	57.7	81	50		27	18	00	37	22	49	77		48	25	
20	119	42.2		10.7	198	14.7		49.4	83	52		25	17	59	37		38	79		14	59	23
21	134	42.4		11.6	212	45.0		41.1	83	54		22		57	38		26	82		15	12	19
22	149	42.6		12.5	227	15.4		32.6	85	56		18		56	39	22	12	86		26	16	
23	164	42.7		13.4	241	45.8		24.0	86	58		15		54	40	21	55	91		15	43	12
24	179	42.9	+8	14.4	256	16.2	-23	15.3	87	60 S	17	11	17	53	18	41	21	35	97	16	04	6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 10 ^h 45.3 ^m		Mag: -3.9 PMG: 13 ^h 29 ^m		Mag: +1.1 PMG: 10 ^h 49 ^m		Mag: -2.1 PMG: 17 ^h 56 ^m		Mag: +0.9 PMG: 11 ^h 13 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	198	14.5	157	58.5	+15	35.7	197	42.6	-0	52.1	90	19.1	+22	47.8	191	16.9	+0	40.9
1	213	17.0	172	57.9		36.8	212	43.3		51.3	105	21.4		47.7	206	19.0		41.0
2	228	19.4	187	57.4		37.8	227	44.0		50.5	120	23.6		47.7	221	21.2		41.1
3	243	21.9	202	56.9		38.8	242	44.6		49.7	135	25.8		47.7	236	23.4		41.2
4	258	24.3	217	56.3		39.9	257	45.3		48.9	150	28.0		47.7	251	25.6		41.4
5	273	26.8	232	55.8	+15	40.9	272	46.0	-0	48.1	165	30.3	+22	47.6	266	27.8	+0	41.5
6	288	29.3	247	55.3	+15	41.9	287	46.7	-0	47.3	180	32.5	+22	47.6	281	30.0	+0	41.6
7	303	31.7	262	54.7		43.0	302	47.4		46.6	195	34.7		47.6	296	32.1		41.7
8	318	34.2	277	54.2		44.0	317	48.0		45.8	210	36.9		47.5	311	34.3		41.8
9	333	36.7	292	53.7		45.0	332	48.7		45.0	225	39.1		47.5	326	36.5		42.0
10	348	39.1	307	53.1		46.1	347	49.4		44.2	240	41.3		47.5	341	38.7		42.1
11	3	41.6	322	52.6	+15	47.1	2	50.1	-0	43.4	255	43.6	+22	47.5	356	40.9	+0	42.2
12	18	44.1	337	52.0	+15	48.1	17	50.8	-0	42.6	270	45.8	+22	47.4	11	43.0	+0	42.3
13	33	46.5	352	51.5		49.1	32	51.5		41.9	285	48.0		47.4	26	45.2		42.4
14	48	49.0	7	51.0		50.2	47	52.1		41.1	300	50.2		47.4	41	47.4		42.5
15	63	51.4	22	50.4		51.2	62	52.8		40.3	315	52.4		47.4	56	49.6		42.7
16	78	53.9	37	49.9		52.2	77	53.5		39.5	330	54.7		47.3	71	51.8		42.8
17	93	56.4	52	49.4	+15	53.3	92	54.2	-0	38.7	345	56.9	+22	47.3	86	54.0	+0	42.9
18	108	58.8	67	48.8	+15	54.3	107	54.9	-0	37.9	0	59.1	+22	47.3	101	56.1	+0	43.0
19	124	01.3	82	48.3		55.3	122	55.6		37.1	16	01.3		47.3	116	58.3		43.1
20	139	03.8	97	47.7		56.3	137	56.3		36.4	31	03.5		47.2	132	00.5		43.3
21	154	06.2	112	47.2		57.3	152	56.9		35.6	46	05.7		47.2	147	02.7		43.4
22	169	08.7	127	46.6		58.4	167	57.6		34.8	61	07.9		47.2	162	04.9		43.5
23	184	11.2	142	46.1	+15	59.4	182	58.3		34.0	76	10.2		47.2	177	07.0		43.6
24	199	13.6	157	45.6	+16	00.4	197	59.0	-0	33.2	91	12.4	+22	47.1	192	09.2	+0	43.7
Dif	—		-5		+10		+7		+8		+22		0		+22		+	

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna												
	SD: 16'0 PMG:12 ^h 01.0 ^m			Edad: 22.9 ^d SD: 15'0 PMG: 7 ^h 09 ^m PHE { 4 ^h : 55'3 12 ^h : 55'6 20 ^h : 55'8 R°: 47 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°											
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m								
0	179	42.9	+8	14.4	256	16.2	115	-23	15.3	88	60 N	3 12	4 10	4 55	4 09	2	10 20	96									
1	194	43.1		15.3	270	46.7	115	-23	06.5	88	58	25	18	5 00	3 52	7	37	91									
2	209	43.2		16.2	285	17.2	115	-22	57.6	89	56	36	25	05	37	12	10 52	86									
3	224	43.4		17.1	299	47.8	116		48.5	91	54	45	32	09	24	15	11 04	82									
4	239	43.6		18.0	314	18.4	116		39.4	93	52	3 54	37	12	12	19	15	79									
5	254	43.7	+8	19.0	328	49.0	116	-22	30.1	91	50	4 01	4 42	5 16	3 02	21	11 25	76									
6	269	43.9	+8	19.9	343	19.7	117	-22	20.7	94	45	4 16	4 52	5 23	2 41	26	11 45	71									
7	284	44.0		20.8	357	50.4	117		11.2	95	40	28	5 01	28	23	30	12 01	67									
8	299	44.2		21.7	12	21.2	118	-22	01.6	96	35	37	08	33	2 09	33	15	63									
9	314	44.4		22.6	26	52.0	118	-21	51.9	97	30	45	13	38	1 56	36	27	60									
10	329	44.5		23.5	41	22.8	118		42.1	98	20	4 57	23	45	34	41	12 47	55									
11	344	44.7	+8	24.5	55	53.7	119	-21	32.1	100	10 N	5 06	5 30	5 52	1 15	44	13 04	51									
12	359	44.9	+8	25.4	70	24.6	119	-21	22.1	100	0	5 13	5 37	5 58	0 57	48	13 20	48									
13	14	45.0		26.3	84	55.6	120		11.9	102	10 S	18	42	6 04	39	52	37	43									
14	29	45.2		27.2	99	26.6	120	-21	01.6	103	20	22	48	10	0 20	56	13 54	39									
15	44	45.4		28.1	113	57.6	120	-20	51.3	103	30	25	52	17	** ** *	**	14 13	35									
16	59	45.5		29.0	128	28.7	121		40.8	105	35	26	55	20	** ** *	**	25	31									
17	74	45.7	+8	30.0	142	59.8	121	-20	30.2	106	40	5 26	5 58	6 25	** ** *	**	14 38	28									
18	89	45.8	+8	30.9	157	31.0	122	-20	19.5	107	45	5 26	6 00	6 30	** ** *	**	14 53	24									
19	104	46.0		31.8	172	02.2	122	-20	08.7	108	50	26	03	36	** ** *	**	15 12	18									
20	119	46.2		32.7	186	33.4	122	-19	57.8	109	52	26	05	39	23	56	80	20	17								
21	134	46.3		33.6	201	04.7	123		46.8	110	54	25	06	42	47	83	30	13									
22	149	46.5		34.5	215	36.0	123		35.7	111	56	25	08	45	37	86	41	10									
23	164	46.7		35.5	230	07.3	123		24.5	112	58	24	09	49	25	90	15	54	6								
24	179	46.8	+8	36.4	244	38.7	124	-19	13.2	113	60 S	5 23	6 11	6 53	23 11	95	16 08	2									
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 10 ^h 41.3 ^m			Mag: -3.9 PMG: 13 ^h 29 ^m			Mag: +1.2 PMG: 10 ^h 48 ^m			Mag: -2.1 PMG: 17 ^h 53 ^m			Mag: +0.9 PMG: 11 ^h 10 ^m														
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec												
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°												
0	199	13.6	157	45.6	+16	00.4	197	59.0	-0	33.2	91	12.4	+22	47.1	192	09.2	+0	43.7									
1	214	16.1	172	45.0		01.4	212	59.7		32.4	106	14.6		47.1	207	11.4		43.8									
2	229	18.6	187	44.5		02.5	228	00.4		31.7	121	16.8		47.1	222	13.6		44.0									
3	244	21.0	202	43.9		03.5	243	01.0		30.9	136	19.0		47.0	237	15.8		44.1									
4	259	23.5	217	43.4		04.5	258	01.7		30.1	151	21.2		47.0	252	18.0		44.2									
5	274	25.9	232	42.8	+16	05.5	273	02.4	-0	29.3	166	23.4	+22	47.0	267	20.1	+0	44.3									
6	289	28.4	247	42.3	+16	06.5	288	03.1	-0	28.5	181	25.7	+22	47.0	282	22.3	+0	44.4									
7	304	30.9	262	41.8		07.5	303	03.8		27.7	196	27.9		46.9	297	24.5		44.6									
8	319	33.3	277	41.2		08.6	318	04.5		26.9	211	30.1		46.9	312	26.7		44.7									
9	334	35.8	292	40.7		09.6	333	05.1		26.2	226	32.3		46.9	327	28.9		44.8									
10	349	38.3	307	40.1		10.6	348	05.8		25.4	241	34.5		46.9	342	31.0		44.9									
11	4	40.7	322	39.6	+16	11.6	3	06.5	-0	24.6	256	36.7	+22	46.8	357	33.2	+0	45.0									
12	19	43.2	337	39.0	+16	12.6	18	07.2	-0	23.8	271	38.9	+22	46.8	12	35.4	+0	45.1									
13	34	45.7	352	38.5		13.6	33	07.9		23.0	286	41.1		46.8	27	37.6		45.3									
14	49	48.1	7	37.9		14.6	48	08.6		22.2	301	43.3		46.7	42	39.8		45.4									
15	64	50.6	22	37.4		15.6	63	09.2		21.5	316	45.6		46.7	57	42.0		45.5									
16	79	53.1	37	36.8		16.6	78	09.9		20.7	331	47.8		46.7	72	44.1		45.6									
17	94	55.5	52	36.3	+16	17.7	93	10.6	-0	19.9	346	50.0	+22	46.7	87	46.3	+0	45.7									
18	109	58.0	67	35.7	+16	18.7	108	11.3	-0	19.1	1	52.2	+22	46.6	102	48.5	+0	45.9									
19	125	00.4	82	35.2		19.7	123	12.0		18.3	16	54.4		46.6	117	50.7		46.0									
20	140	02.9	97	34.6		20.7	138	12.7		17.5	31	56.6		46.6	132	52.9		46.1									
21	155	05.4	112	34.1		21.7	153	13.4		16.8	46	58.8		46.6	147	55.1		46.2									
22	170	07.8	127	33.5		22.7	168	14.0		16.0	62	01.0		46.5	162	57.2		46.3									
23	185	10.3	142	33.0		23.7	183	14.7		15.2	77	03.2		46.5	177	59.4		46.4									
24	200	12.8	157	32.4	+16	24.7	198	15.4	-0	14.4	92	05.4	+22	46.5	193	01.6	+0	46.6									
Dif	—			-5			+10			+7			+8			+22			0			+22			+1		

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna							
	SD: 16'0 PMG:12 ^h 00.7 ^m			Edad: 23.9 ^d SD: 15'2 PMG: 7 ^h 56 ^m							PHE { 4 ^h : 56'0 12 ^h : 56'3 20 ^h : 56'6 R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Civil	Náutico	Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m			
0	179	46.8	+8	36.4	244	38.7	-19	13.2	60 N	19	11	19	56	20	56	4	11	2	11	56	97	
1	194	47.0		37.3	259	10.1	124	-19	01.8	58	05		48	42	3	59	6	12	08	92		
2	209	47.1		38.2	273	41.6	125	-18	50.3	56	19	01	40	31	49	9		18	88			
3	224	47.3		39.1	288	13.0	124		38.6	54	18	56	34	21	39	13		26	85			
4	239	47.5		40.0	302	44.6	126		26.9	52	52		28	12	31	16		34	82			
5	254	47.6	+8	40.9	317	16.1	125	-18	15.1	50	18	49	19	23	20	04	3	23	18	12	41	79
6	269	47.8	+8	41.9	331	47.7	126	-18	03.2	45	18	42	19	12	19	49	3	07	23	12	56	73
7	284	47.9		42.8	346	19.3	126	-17	51.2	40	35		19	03	2	53	28	13	08	69		
8	299	48.1		43.7	0	50.9	126		39.1	35	30		18	56	27	42	31		18	65		
9	314	48.3		44.6	15	22.6	127		27.0	30	25		50	19	32	34		27	62			
10	329	48.4		45.5	29	54.3	127		14.7	20	17		40	19	06	2	15	39	42	57		
11	344	48.6	+8	46.4	44	26.1	128	-17	02.3	10 N	18	10	18	32	18	57	1	59	44	13	55	52
12	359	48.8	+8	47.3	58	57.8	127	-16	49.8	0	18	04	18	25	18	49	1	45	48	14	08	47
13	14	48.9		48.2	73	29.6	128		37.3	10 S	17	58	19	44		31	52		20	43		
14	29	49.1		49.1	88	01.5	129		24.6	20	51		13	39	1	16	56		33	38		
15	44	49.2		50.1	102	33.3	128	-16	11.9	30	44		08	36	0	58	62		48	33		
16	59	49.4		51.0	117	05.2	129	-15	59.1	35	40		05	35	47	65		14	56	30		
17	74	49.6	+8	51.9	131	37.1	129	-15	46.2	40	17	35	18	02	18	34	0	36	68	15	06	26
18	89	49.7	+8	52.8	146	09.1	130	-15	33.2	45	17	30	17	59	18	33	0	22	72	15	17	22
19	104	49.9		53.7	160	41.0	129		20.1	50	23		56	33	0	04	79		30	17		
20	119	50.0		54.6	175	13.0	130	-15	06.9	52	20		54	33	**	**	**		37	14		
21	134	50.2		55.5	189	45.0	130	-14	53.7	54	17		53	34	**	**	**		43	12		
22	149	50.3		56.4	204	17.1	131		40.3	56	13		51	34	**	**	**		15	51	9	
23	164	50.5		57.3	218	49.1	130		26.9	58	09		49	34	**	**	**		16	00	5	
24	179	50.7	+8	58.2	233	21.2	131	-14	13.4	60 S	17	05	17	47	18	35	**	**	**	16	10	1

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO									
	PMG 10 ^h 37.4 ^m		Mag: -3.9 PMG: 13 ^h 30 ^m			Mag: +1.2 PMG: 10 ^h 46 ^m			Mag: -2.1 PMG: 17 ^h 49 ^m			Mag: +0.9 PMG: 11 ^h 06 ^m									
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	'	°	'	°	'	°	'	°	'
0	200	12.8	157	32.4	+16	24.7	198	15.4	-0	14.4	92	05.4	+22	46.5	193	01.6	+0	46.6			
1	215	15.2	172	31.9		25.7	213	16.1		13.6	107	07.6		46.4	208	03.8		46.7			
2	230	17.7	187	31.3		26.7	228	16.8		12.8	122	09.9		46.4	223	06.0		46.8			
3	245	20.2	202	30.8		27.7	243	17.5		12.0	137	12.1		46.4	238	08.2		46.9			
4	260	22.6	217	30.2		28.7	258	18.2		11.3	152	14.3		46.4	253	10.3		47.0			
5	275	25.1	232	29.6	+16	29.7	273	18.8	-0	10.5	167	16.5	+22	46.3	268	12.5	+0	47.1			
6	290	27.6	247	29.1	+16	30.7	288	19.5	-0	09.7	182	18.7	+22	46.3	283	14.7	+0	47.3			
7	305	30.0	262	28.5		31.7	303	20.2		08.9	197	20.9		46.3	298	16.9		47.4			
8	320	32.5	277	28.0		32.7	318	20.9		08.1	212	23.1		46.2	313	19.1		47.5			
9	335	34.9	292	27.4		33.7	333	21.6		07.3	227	25.3		46.2	328	21.2		47.6			
10	350	37.4	307	26.9		34.7	348	22.3		06.6	242	27.5		46.2	343	23.4		47.7			
11	5	39.9	322	26.3	+16	35.7	3	23.0	-0	05.8	257	29.7	+22	46.2	358	25.6	+0	47.9			
12	20	42.3	337	25.7	+16	36.7	18	23.6	-0	05.0	272	31.9	+22	46.1	13	27.8	+0	48.0			
13	35	44.8	352	25.2		37.7	33	24.3		04.2	287	34.1		46.1	28	30.0		48.1			
14	50	47.3	7	24.6		38.7	48	25.0		03.4	302	36.3		46.1	43	32.2		48.2			
15	65	49.7	22	24.1		39.7	63	25.7		02.6	317	38.5		46.0	58	34.3		48.3			
16	80	52.2	37	23.5		40.7	78	26.4		01.9	332	40.7		46.0	73	36.5		48.4			
17	95	54.7	52	23.0	+16	41.7	93	27.1	-0	01.1	347	42.9	+22	46.0	88	38.7	+0	48.6			
18	110	57.1	67	22.4	+16	42.6	108	27.8	-0	00.3	2	45.1	+22	46.0	103	40.9	+0	48.7			
19	125	59.6	82	21.8		43.6	123	28.4	+0	00.5	17	47.3		45.9	118	43.1		48.8			
20	141	02.0	97	21.3		44.6	138	29.1		01.3	32	49.5		45.9	133	45.3		48.9			
21	156	04.5	112	20.7		45.6	153	29.8		02.1	47	51.7		45.9	148	47.4		49.0			
22	171	07.0	127	20.1		46.6	168	30.5		02.8	62	53.9		45.8	163	49.6		49.1			
23	186	09.4	142	19.6		47.6	183	31.2		03.6	77	56.1		45.8	178	51.8		49.3			
24	201	11.9	157	19.0	+16	48.6	198	31.9	+0	04.4	92	58.3	+22	45.8	193	54.0	+0	49.4			
Dif	—		-6		+10		+7		+8		+22		0		+22			+1			

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 16'0 PMG:12 ^h 00.5 ^m			Edad: 24.9 ^d SD: 15'4 PMG: 8 ^h 43 ^m																	
				PHE { 4 ^h : 56'8 12 ^h : 57'1 20 ^h : 57'4 R°: 45 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°						
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m			
0	179	50.7	+8	58.2	233	21.2	131	-14	13.4	3	04	4	50	4	12	0	13	31	95		
1	194	50.8	+8	59.2	247	53.3	131	-13	59.8	18	13	4	55	4	04	4	38	91			
2	209	51.0	+9	00.1	262	25.4	131		46.1	30	20	5	00	3	57	7	44	87			
3	224	51.1		01.0	276	57.5	131		32.4	40	27	04	51	10	49	88					
4	239	51.3		01.9	291	29.7	132		18.5	48	32	08	45	13	54	8					
5	254	51.5	+9	02.8	306	01.9	132	-13	04.6	3	56	4	38	5	11	3	40	15	13	58	79
6	269	51.6	+9	03.7	320	34.1	132	-12	50.7	4	12	4	49	5	19	3	29	20	14	08	73
7	284	51.8		04.6	335	06.3	132		36.6	24	4	57	25	20	24	15	23	15	69		
8	299	51.9		05.5	349	38.5	132		22.5	34	5	05	31	12	28	22	64				
9	314	52.1		06.4	4	10.7	132	-12	08.2	42	11	36	3	05	31	27	62				
10	329	52.2		07.3	18	43.0	133	-11	54.0	4	55	21	44	2	53	36	37	56			
11	344	52.4	+9	08.2	33	15.2	132	-11	39.6	5	05	5	29	5	51	2	42	41	14	46	50
12	359	52.6	+9	09.1	47	47.5	133	-11	25.2	5	12	5	36	5	57	2	32	46	14	54	45
13	14	52.7		10.0	62	19.8	133	-11	10.7	18	42	6	04	22	50	15	02	41			
14	29	52.9		10.9	76	52.1	133	-10	56.1	22	48	10	2	11	55	10	36				
15	44	53.0		11.8	91	24.4	133		41.5	26	54	18	1	58	61	19	31				
16	59	53.2		12.7	105	56.7	133		26.8	27	5	57	22	51	64	25	27				
17	74	53.3	+9	13.6	120	29.0	133	-10	12.0	5	28	6	00	6	27	1	43	68	15	31	23
18	89	53.5	+9	14.6	135	01.3	133	-9	57.2	5	29	6	03	6	32	1	33	73	15	38	19
19	104	53.7		15.5	149	33.7	134		42.3	29	06	39	21	78	46	14					
20	119	53.8		16.4	164	06.0	133		27.3	29	08	42	16	80	50	12					
21	134	54.0		17.3	178	38.3	133	-9	12.3	29	10	45	10	83	54	9					
22	149	54.1		18.2	193	10.7	134	-8	57.2	28	11	49	1	03	87	15	59	6			
23	164	54.3		19.1	207	43.0	133		42.0	28	13	53	0	55	91	16	04	3			
24	179	54.4	+9	20.0	222	15.3	133	-8	26.8	5	27	6	15	6	58	0	46	95	16	10	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 10 ^h 33.5 ^m		Mag: -3.9 PMG: 13 ^h 31 ^m			Mag: +1.2 PMG: 10 ^h 45 ^m			Mag: -2.1 PMG: 17 ^h 46 ^m			Mag: +0.9 PMG: 11 ^h 03 ^m									
	hG ♊	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	201	11.9	157	19.0	+16	48.6	198	31.9	+0	04.4	92	58.3	+22	45.8	193	54.0	+0	49.4			
1	216	14.4	172	18.4		49.6	213	32.6		05.2	108	00.5		45.8	208	56.2		49.5			
2	231	16.8	187	17.9		50.5	228	33.2		06.0	123	02.7		45.7	223	58.4		49.6			
3	246	19.3	202	17.3		51.5	243	33.9		06.8	138	04.9		45.7	239	00.5		49.7			
4	261	21.8	217	16.8		52.5	258	34.6		07.5	153	07.1		45.7	254	02.7		49.8			
5	276	24.2	232	16.2	+16	53.5	273	35.3	+0	08.3	168	09.3	+22	45.6	269	04.9	+0	50.0			
6	291	26.7	247	15.6	+16	54.5	288	36.0	+0	09.1	183	11.5	+22	45.6	284	07.1	+0	50.1			
7	306	29.2	262	15.1		55.5	303	36.7		09.9	198	13.7		45.6	299	09.3		50.2			
8	321	31.6	277	14.5		56.4	318	37.4		10.7	213	15.9		45.6	314	11.5		50.3			
9	336	34.1	292	13.9		57.4	333	38.0		11.5	228	18.1		45.5	329	13.6		50.4			
10	351	36.5	307	13.4		58.4	348	38.7		12.2	243	20.3		45.5	344	15.8		50.5			
11	6	39.0	322	12.8	+16	59.4	3	39.4	+0	13.0	258	22.5	+22	45.5	359	18.0	+0	50.7			
12	21	41.5	337	12.2	+17	00.4	18	40.1	+0	13.8	273	24.7	+22	45.4	14	20.2	+0	50.8			
13	36	43.9	352	11.6		01.3	33	40.8		14.6	288	26.9		45.4	29	22.4		50.9			
14	51	46.4	7	11.1		02.3	48	41.5		15.4	303	29.1		45.4	44	24.6		51.0			
15	66	48.9	22	10.5		03.3	63	42.2		16.2	318	31.3		45.3	59	26.7		51.1			
16	81	51.3	37	09.9		04.3	78	42.8		16.9	333	33.5		45.3	74	28.9		51.2			
17	96	53.8	52	09.4	+17	05.2	93	43.5	+0	17.7	348	35.7	+22	45.3	89	31.1	+0	51.4			
18	111	56.3	67	08.8	+17	06.2	108	44.2	+0	18.5	3	37.9	+22	45.3	104	33.3	+0	51.5			
19	126	58.7	82	08.2		07.2	123	44.9		19.3	18	40.1		45.2	119	35.5		51.6			
20	142	01.2	97	07.6		08.1	138	45.6		20.1	33	42.3		45.2	134	37.7		51.7			
21	157	03.6	112	07.1		09.1	153	46.3		20.9	48	44.5		45.2	149	39.9		51.8			
22	172	06.1	127	06.5		10.1	168	47.0		21.6	63	46.7		45.1	164	42.0		51.9			
23	187	08.6	142	05.9		11.1	183	47.7		22.4	78	48.9		45.1	179	44.2		52.1			
24	202	11.0	157	05.3	+17	12.0	198	48.3	+0	23.2	93	51.1	+22	45.1	194	46.4	+0	52.2			
Dif	—		-6		+10		+7		+8		+22		0		+22		+				

UT	SOL			LUNA			Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG:12 ^h 00.2 ^m			Edad: 25.9 ^d SD: 15'7 PMG: 9 ^h 28 ^m										
	PHE { 4 ^h : 57'7 12 ^h : 58'0 20 ^h : 58'3 R°: 48 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179 54.4	+9 20.0	222 15.3		-8 26.8		60 N	19 16	20 02	21 03	4 12 0		15 06 99	
1	194 54.6		236 47.7	134	-8 11.5	153	58	10	19 53	20 48	08 4		09 94	
2	209 54.7		251 20.0	133	-7 56.2	154	56	05	45	36	04 7		11 91	
3	224 54.9		265 52.3	133		40.8	54	19 00	38	26	4 01 10		13 88	
4	239 55.0		280 24.6	133		25.4	52	18 56	32	16	3 58 13		15 85	
5	254 55.2	+9 24.5	294 56.9	133	-7 09.9	155	50	18 52	19 26	20 08	3 55 15		15 17 82	
6	269 55.4	+9 25.4	309 29.3	134	-6 54.3	156	45	18 44	19 15	19 52	3 49 20		15 21 76	
7	284 55.5		324 01.6	133		38.7	40	37	19 05	39	44 25		24 72	
8	299 55.7		338 33.8	132		23.1	35	32	18 58	29	40 28		26 68	
9	314 55.8		353 06.1	133	-6 07.4	157	30	27	51	20	36 31		29 64	
10	329 56.0		7 38.4	133	-5 51.6	158	20	18	40	19 07	29 38		33 58	
11	344 56.1	+9 29.9	22 10.7	133	-5 35.8	158	10 N	18 10	18 32	18 57	3 23 43		15 36 53	
12	359 56.3	+9 30.8	36 42.9	132	-5 20.0	158	0	18 04	18 25	18 49	3 18 47		15 39 48	
13	14 56.4		51 15.1	132	-5 04.1	159	10 S	17 57	18	43	12 52		43 43	
14	29 56.6		65 47.3	132	-4 48.1	160	20	50	12	38	3 06 58		46 38	
15	44 56.7		80 19.5	132		32.1	30	42	06	34	2 59 64		50 31	
16	59 56.9		94 51.7	132	-4 16.1	160	35	37	18 03	32	55 67		52 28	
17	74 57.0	+9 35.3	109 23.9	132	-4 00.0	161	40	17 32	17 59	18 31	2 51 71		15 54 25	
18	89 57.2	+9 36.2	123 56.0	131	-3 43.9	161	45	17 26	17 56	18 30	2 46 75		15 57 20	
19	104 57.3		138 28.1	131		27.8	50	19	52	29	39 81		16 00 15	
20	119 57.5		153 00.2	131	-3 11.6	162	52	16	50	29	36 84		02 12	
21	134 57.7		167 32.3	131	-2 55.4	162	54	12	48	29	33 87		03 10	
22	149 57.8		182 04.3	130		39.1	56	08	46	29	30 89		05 7	
23	164 58.0		196 36.3	130		22.9	58	17 04	44	29	26 93		07 4	
24	179 58.1	+9 41.5	211 08.3	130	-2 06.5	164	60 S	16 59	17 42	18 30	2 21 97		16 09 1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 10 ^h 29.5 ^m		Mag: -3.9 PMG: 13 ^h 32 ^m		Mag: +1.2 PMG: 10 ^h 44 ^m		Mag: -2.1 PMG: 17 ^h 42 ^m		Mag: +0.9 PMG: 10 ^h 59 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♏	Dec	hG ♃	Dec	
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	
0	202 11.0	157 05.3	+17 12.0	198 48.3	+0 23.2	93 51.1	+22 45.1	194 46.4	+0 52.2	
1	217 13.5	172 04.8	13.0	213 49.0	24.0	108 53.2	45.1	209 48.6	52.3	
2	232 16.0	187 04.2	14.0	228 49.7	24.8	123 55.4	45.0	224 50.8	52.4	
3	247 18.4	202 03.6	14.9	243 50.4	25.5	138 57.6	45.0	239 53.0	52.5	
4	262 20.9	217 03.0	15.9	258 51.1	26.3	153 59.8	45.0	254 55.1	52.6	
5	277 23.4	232 02.5	+17 16.9	273 51.8	+0 27.1	169 02.0	+22 44.9	269 57.3	+0 52.8	
6	292 25.8	247 01.9	+17 17.8	288 52.5	+0 27.9	184 04.2	+22 44.9	284 59.5	+0 52.9	
7	307 28.3	262 01.3	18.8	303 53.2	28.7	199 06.4	44.9	300 01.7	53.0	
8	322 30.8	277 00.7	19.7	318 53.8	29.5	214 08.6	44.8	315 03.9	53.1	
9	337 33.2	292 00.2	20.7	333 54.5	30.2	229 10.8	44.8	330 06.1	53.2	
10	352 35.7	306 59.6	21.7	348 55.2	31.0	244 13.0	44.8	345 08.2	53.3	
11	7 38.1	321 59.0	+17 22.6	3 55.9	+0 31.8	259 15.2	+22 44.8	0 10.4	+0 53.5	
12	22 40.6	336 58.4	+17 23.6	18 56.6	+0 32.6	274 17.4	+22 44.7	15 12.6	+0 53.6	
13	37 43.1	351 57.8	24.5	33 57.3	33.4	289 19.5	44.7	30 14.8	53.7	
14	52 45.5	6 57.3	25.5	48 58.0	34.2	304 21.7	44.7	45 17.0	53.8	
15	67 48.0	21 56.7	26.5	63 58.7	34.9	319 23.9	44.6	60 19.2	53.9	
16	82 50.5	36 56.1	27.4	78 59.3	35.7	334 26.1	44.6	75 21.4	54.0	
17	97 52.9	51 55.5	+17 28.4	94 00.0	+0 36.5	349 28.3	+22 44.6	90 23.5	+0 54.2	
18	112 55.4	66 54.9	+17 29.3	109 00.7	+0 37.3	4 30.5	+22 44.5	105 25.7	+0 54.3	
19	127 57.9	81 54.3	30.3	124 01.4	38.1	19 32.7	44.5	120 27.9	54.4	
20	143 00.3	96 53.8	31.2	139 02.1	38.8	34 34.9	44.5	135 30.1	54.5	
21	158 02.8	111 53.2	32.2	154 02.8	39.6	49 37.1	44.4	150 32.3	54.6	
22	173 05.3	126 52.6	33.1	169 03.5	40.4	64 39.2	44.4	165 34.5	54.7	
23	188 07.7	141 52.0	34.1	184 04.2	41.2	79 41.4	44.4	180 36.6	54.9	
24	203 10.2	156 51.4	+17 35.0	199 04.8	+0 42.0	94 43.6	+22 44.4	195 38.8	+0 55.0	
Dif	—	-6	+10	+7	+8	+22	0	+22	+	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'9 PMG:12 ^h 00.0 ^m			Edad: 26.9 ^d SD: 15'9 PMG: 10 ^h 15 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	179	58.1	+9	211	08.3	-2	06.5	60 N	2 56	3 57	4 44	4 11	0	16 43	101			
1	194	58.3		225	40.3	-1	50.2	58	3 11	4 07	49	11	3	42	97			
2	209	58.4		240	12.2		33.8	56	23	15	55	10	6	41	93			
3	224	58.6		254	44.1		17.4	54	34	21	4 59	10	9	40	89			
4	239	58.7		269	16.0	-1	01.0	52	43	28	5 04	09	12	39	86			
5	254	58.9	+9	283	47.8	-0	44.5	50	3 51	4 33	5 07	4 09	14	16 38	84			
6	269	59.0	+9	298	19.6	-0	28.0	45	4 08	4 45	5 16	4 08	19	16 36	78			
7	284	59.2		312	51.3	-0	11.5	40	21	4 54	22	07	24	34	73			
8	299	59.3		327	23.1	+0	05.0	35	31	5 02	28	07	27	33	69			
9	314	59.5		341	54.7		21.6	30	40	09	33	06	31	32	65			
10	329	59.6		356	26.4		38.1	20	4 53	20	42	05	37	29	60			
11	344	59.8	+9	10	58.0	+0	54.7	10 N	5 03	5 28	5 50	4 04	43	16 28	53			
12	359	59.9	+9	25	29.5	+1	11.3	0	5 11	5 36	5 57	4 04	47	16 26	48			
13	15	00.1		53.2	40	01.1	27.9	10 S	18	42	6 04	03	52	24	44			
14	30	00.2		54.1	54	32.5	+1	44.6	20	23	49	11	02	58	22	38		
15	45	00.4		54.9	69	03.9	+2	01.2	30	27	55	19	01	64	20	32		
16	60	00.5		55.8	83	35.3	17.8	35	29	5 58	24	01	68	19	29			
17	75	00.7	+9	56.7	98	06.6	+2	34.5	40	5 30	6 01	6 29	4 00	72	16 17	25		
18	90	00.8	+9	57.6	112	37.9	+2	51.2	45	5 31	6 05	6 35	4 00	76	16 16	20		
19	105	01.0		58.5	127	09.1	+3	07.8	50	32	09	42	3 59	82	14	15		
20	120	01.1	+9	59.4	141	40.3	24.5	52	32	11	45	59	85	13	12			
21	135	01.3	+10	00.3	156	11.4	41.2	54	32	13	49	58	88	12	10			
22	150	01.4		01.2	170	42.4	+3	57.9	56	32	15	53	58	91	11	7		
23	165	01.5		02.1	185	13.4	+4	14.5	58	32	17	6 58	57	95	10	3		
24	180	01.7	+10	03.0	199	44.4	+4	31.2	60 S	5 32	6 20	7 03	3 57	99	16 09	**		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 25.6 ^m		Mag: -3.9 PMG: 13 ^h 33 ^m		Mag: +1.2 PMG: 10 ^h 43 ^m		Mag: -2.1 PMG: 17 ^h 39 ^m		Mag: +0.9 PMG: 10 ^h 56 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	203	10.2	156	51.4	+17	35.0	199	04.8	+0	42.0	94	43.6	+22	44.4	195	38.8	+0	55.0
1	218	12.6	171	50.8		36.0	214	05.5		42.8	109	45.8		44.3	210	41.0		55.1
2	233	15.1	186	50.2		36.9	229	06.2		43.5	124	48.0		44.3	225	43.2		55.2
3	248	17.6	201	49.7		37.9	244	06.9		44.3	139	50.2		44.3	240	45.4		55.3
4	263	20.0	216	49.1		38.8	259	07.6		45.1	154	52.4		44.2	255	47.6		55.4
5	278	22.5	231	48.5	+17	39.8	274	08.3	+0	45.9	169	54.6	+22	44.2	270	49.8	+0	55.6
6	293	25.0	246	47.9	+17	40.7	289	09.0	+0	46.7	184	56.7	+22	44.2	285	51.9	+0	55.7
7	308	27.4	261	47.3		41.7	304	09.7		47.4	199	58.9		44.1	300	54.1		55.8
8	323	29.9	276	46.7		42.6	319	10.3		48.2	215	01.1		44.1	315	56.3		55.9
9	338	32.4	291	46.1		43.6	334	11.0		49.0	230	03.3		44.1	330	58.5		56.0
10	353	34.8	306	45.5		44.5	349	11.7		49.8	245	05.5		44.0	346	00.7		56.1
11	8	37.3	321	44.9	+17	45.4	4	12.4	+0	50.6	260	07.7	+22	44.0	1	02.9	+0	56.2
12	23	39.7	336	44.4	+17	46.4	19	13.1	+0	51.4	275	09.8	+22	44.0	16	05.1	+0	56.4
13	38	42.2	351	43.8		47.3	34	13.8		52.1	290	12.0		44.0	31	07.2		56.5
14	53	44.7	6	43.2		48.3	49	14.5		52.9	305	14.2		43.9	46	09.4		56.6
15	68	47.1	21	42.6		49.2	64	15.2		53.7	320	16.4		43.9	61	11.6		56.7
16	83	49.6	36	42.0		50.1	79	15.9		54.5	335	18.6		43.9	76	13.8		56.8
17	98	52.1	51	41.4	+17	51.1	94	16.5	+0	55.3	350	20.8	+22	43.8	91	16.0	+0	56.9
18	113	54.5	66	40.8	+17	52.0	109	17.2	+0	56.0	5	22.9	+22	43.8	106	18.2	+0	57.1
19	128	57.0	81	40.2		52.9	124	17.9		56.8	20	25.1		43.8	121	20.3		57.2
20	143	59.5	96	39.6		53.9	139	18.6		57.6	35	27.3		43.7	136	22.5		57.3
21	159	01.9	111	39.0		54.8	154	19.3		58.4	50	29.5		43.7	151	24.7		57.4
22	174	04.4	126	38.4		55.7	169	20.0		59.2	65	31.7		43.7	166	26.9		57.5
23	189	06.9	141	37.8		56.7	184	20.7	+0	59.9	80	33.8		43.6	181	29.1		57.6
24	204	09.3	156	37.2	+17	57.6	199	21.4	+1	00.7	95	36.0	+22	43.6	196	31.3	+0	57.8
Dif	—		-6		+9		+7		+8		+22		0		+22		+1	

UT	SOL				● LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 59.8 ^m				Edad: 27.9 ^d SD: 16'1 PMG: 11 ^h 03 ^m																	
	hG ☉		Dec		hG ☾		Dif		Dec				Dif		Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	180	01.7	+10	03.0	199	44.4		+4	31.2	167	60 N	19 21	20 07	21 10	4 11	1	18 24	109				
1	195	01.8		03.8	214	15.3	119	+4	47.9	166	58	14	19 58	20 55	14 5		19 104					
2	210	02.0		04.7	228	46.1	118	+5	04.5	166	56	09	49	42	16 9		14 99					
3	225	02.1		05.6	243	16.8	117		21.2	167	54	19 04	42	30	19 12		09 96					
4	240	02.3		06.5	257	47.5	117		37.8	166	52	18 59	36	21	21 15		05 93					
5	255	02.4	+10	07.4	272	18.2	117	+5	54.5	167	50	18 55	19 30	20 12	4 23	18	18 02	89				
6	270	02.6	+10	08.3	286	48.7	115	+6	11.1	166	45	18 47	19 17	19 55	4 27	24	17 54	83				
7	285	02.7		09.2	301	19.2	115		27.7	166	40	39	19 08	41	31 28		47 79					
8	300	02.9		10.1	315	49.7	115	+6	44.3	166	35	33	18 59	30	34 32		42 74					
9	315	03.0		10.9	330	20.0	113	+7	00.8	165	30	28	52	21	37 35		37 70					
10	330	03.2		11.8	344	50.3	113		17.4	166	20	19	41	19 07	42 42		29 64					
11	345	03.3	+10	12.7	359	20.5	112	+7	33.9	165	10 N	18 11	18 32	18 57	4 47	46	17 21	59				
12	0	03.5	+10	13.6	13	50.7	112	+7	50.4	165	0	18 03	18 24	18 49	4 51	52	17 14	54				
13	15	03.6		14.5	28	20.7	110	+8	06.9	165	10 S	17 56	17	42	4 55	57	08 48					
14	30	03.7		15.4	42	50.7	110		23.4	165	20	48	10	36	5 00	62	17 00	44				
15	45	03.9		16.3	57	20.6	109		39.8	164	30	40	04	32	05 69		16 52	37				
16	60	04.0		17.1	71	50.5	109	+8	56.2	164	35	35	18 00	30	09 72		48 33					
17	75	04.2	+10	18.0	86	20.2	107	+9	12.5	163	40	17 29	17 57	18 28	5 12	77	16 42	30				
18	90	04.3	+10	18.9	100	49.9	107	+9	28.9	164	45	17 23	17 52	18 27	5 16	82	16 36	25				
19	105	04.5		19.8	115	19.5	106	+9	45.2	163	50	15	48	25	21 88		29 19					
20	120	04.6		20.7	129	49.0	105	+10	01.4	162	52	12	46	25	24 90		25 17					
21	135	04.8		21.6	144	18.4	104		17.6	162	54	08	44	25	26 94		22 13					
22	150	04.9		22.4	158	47.8	104		33.8	162	56	17 03	41	24	29 97		18 9					
23	165	05.0		23.3	173	17.0	102	+10	49.9	161	58	16 59	39	24	32 101		13 6					
24	180	05.2	+10	24.2	187	46.2	102	+11	06.0	161	60 S	16 53	17 36	18 24	5 36	106	16 08	2				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 10 ^h 21.7 ^m		Mag: -3.9 PMG: 13 ^h 34 ^m		Mag: +1.2 PMG: 10 ^h 42 ^m		Mag: -2.1 PMG: 17 ^h 35 ^m		Mag: +0.9 PMG: 10 ^h 52 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	204	09.3	156	37.2	+17	57.6	199	21.4	+1	00.7	95	36.0	+22	43.6	196	31.3	+0	57.8
1	219	11.8	171	36.6		58.5	214	22.1		01.5	110	38.2		43.6	211	33.5		57.9
2	234	14.2	186	36.0	+17	59.5	229	22.7		02.3	125	40.4		43.5	226	35.6		58.0
3	249	16.7	201	35.4	+18	00.4	244	23.4		03.1	140	42.6		43.5	241	37.8		58.1
4	264	19.2	216	34.8		01.3	259	24.1		03.9	155	44.7		43.5	256	40.0		58.2
5	279	21.6	231	34.2	+18	02.3	274	24.8	+1	04.6	170	46.9	+22	43.4	271	42.2	+0	58.3
6	294	24.1	246	33.6	+18	03.2	289	25.5	+1	05.4	185	49.1	+22	43.4	286	44.4	+0	58.4
7	309	26.6	261	33.0		04.1	304	26.2		06.2	200	51.3		43.4	301	46.6		58.6
8	324	29.0	276	32.4		05.0	319	26.9		07.0	215	53.5		43.3	316	48.8		58.7
9	339	31.5	291	31.8		06.0	334	27.6		07.8	230	55.6		43.3	331	50.9		58.8
10	354	34.0	306	31.2		06.9	349	28.3		08.5	245	57.8		43.3	346	53.1		58.9
11	9	36.4	321	30.6	+18	07.8	4	28.9	+1	09.3	261	00.0	+22	43.3	1	55.3	+0	59.0
12	24	38.9	336	30.0	+18	08.7	19	29.6	+1	10.1	276	02.2	+22	43.2	16	57.5	+0	59.1
13	39	41.3	351	29.4		09.6	34	30.3		10.9	291	04.3		43.2	31	59.7		59.3
14	54	43.8	6	28.8		10.6	49	31.0		11.7	306	06.5		43.2	47	01.9		59.4
15	69	46.3	21	28.2		11.5	64	31.7		12.4	321	08.7		43.1	62	04.1		59.5
16	84	48.7	36	27.6		12.4	79	32.4		13.2	336	10.9		43.1	77	06.3		59.6
17	99	51.2	51	27.0	+18	13.3	94	33.1	+1	14.0	351	13.0	+22	43.1	92	08.4	+0	59.7
18	114	53.7	66	26.4	+18	14.2	109	33.8	+1	14.8	6	15.2	+22	43.0	107	10.6	+0	59.8
19	129	56.1	81	25.8		15.2	124	34.5		15.6	21	17.4		43.0	122	12.8	+0	59.9
20	144	58.6	96	25.2		16.1	139	35.1		16.3	36	19.6		43.0	137	15.0	+1	00.1
21	160	01.1	111	24.6		17.0	154	35.8		17.1	51	21.7		42.9	152	17.2		00.2
22	175	03.5	126	24.0		17.9	169	36.5		17.9	66	23.9		42.9	167	19.4		00.3
23	190	06.0	141	23.4		18.8	184	37.2		18.7	81	26.1		42.9	182	21.6		00.4
24	205	08.5	156	22.8	+18	19.7	199	37.9	+1	19.5	96	28.3	+22	42.8	197	23.7	+1	00.5
Dif	—		-6		+9		+7		+8		+22		0		+22		+	

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'9 PMG:11 ^h 59.5 ^m				Edad: 28.9 ^d PHE { 4 ^h : 60'0 12 ^h : 60'2 20 ^h : 60'4 SD: 16'3 PMG: 11 ^h 54 ^m R°: 55 ^m																
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m			
0	180	05.2	+10	24.2	187	46.2	+11	06.0	160	60 N	2 48	3 51	4 38	4 11 1	20 12 115						
1	195	05.3		25.1	202	15.3		22.0	160	58	3 04	4 01	44	18 6	20 01 108						
2	210	05.5		26.0	216	44.2		38.0	159	56	17	09	50	24 10	19 52 103						
3	225	05.6		26.8	231	13.1	+11	53.9	159	54	28	16	55	30 14	44 98						
4	240	05.8		27.7	245	42.0	+12	09.8	159	52	38	23	4 59	35 17	36 95						
5	255	05.9	+10	28.6	260	10.7	+12	25.6	158	50	3 46	4 29	5 03	4 39 20	19 30 91						
6	270	06.0	+10	29.5	274	39.3	+12	41.4	158	45	4 04	4 41	5 12	4 49 26	19 16 84						
7	285	06.2		30.4	289	07.8	+12	57.1	157	40	17	4 51	19	4 57 31	19 04 80						
8	300	06.3		31.2	303	36.2	+13	12.7	156	35	28	5 00	26	5 05 34	18 54 76						
9	315	06.5		32.1	318	04.6		28.3	156	30	37	07	31	11 38	46 72						
10	330	06.6		33.0	332	32.8		43.8	155	20	4 52	18	41	22 44	31 66						
11	345	06.8	+10	33.9	347	00.9	+13	59.2	154	10 N	5 02	5 27	5 49	5 32 49	18 18 62						
12	0	06.9	+10	34.8	1	29.0	+14	14.6	154	0	5 11	5 35	5 56	5 41 55	18 07 56						
13	15	07.0		35.6	15	56.9		29.9	153	10 S	18	42	6 04	5 51 59	17 55 52						
14	30	07.2		36.5	30	24.7	+14	45.1	152	20	23	49	11	6 01 64	42 47						
15	45	07.3		37.4	44	52.5	+15	00.2	151	30	28	5 56	20	13 70	28 41						
16	60	07.5		38.3	59	20.1		15.3	151	35	30	6 00	25	19 75	20 37						
17	75	07.6	+10	39.1	73	47.6	+15	30.3	150	40	5 32	6 03	6 31	6 27 79	17 10 34						
18	90	07.7	+10	40.0	88	15.0	+15	45.2	149	45	5 33	6 08	6 37	6 36 84	16 59 29						
19	105	07.9		40.9	102	42.3	+16	00.0	148	50	35	12	45	47 91	46 23						
20	120	08.0		41.8	117	09.6	+16	14.7	147	52	35	14	49	53 93	40 20						
21	135	08.2		42.6	131	36.7		29.3	146	54	35	17	53	6 58 97	34 16						
22	150	08.3		43.5	146	03.7		43.9	146	56	36	19	6 57	7 05 101	26 12						
23	165	08.4		44.4	160	30.5	+16	58.3	144	58	36	22	7 02	12 106	18 7						
24	180	08.6	+10	45.3	174	57.3	+17	12.7	144	60 S	5 36	6 24	7 07	7 20 112	16 08 2						
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 10 ^h 17.7 ^m			Mag: -3.9 PMG: 13 ^h 35 ^m			Mag: +1.2 PMG: 10 ^h 41 ^m			Mag: -2.1 PMG: 17 ^h 32 ^m			Mag: +0.9 PMG: 10 ^h 49 ^m								
	hG ♈			hG ♀			hG ♂			hG ♃			hG ♄								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	205	08.5	156	22.8	+18	19.7	199	37.9	+1	19.5	96	28.3	+22	42.8	197	23.7	+1	00.5			
1	220	10.9	171	22.2		20.6	214	38.6		20.2	111	30.4		42.8	212	25.9		00.6			
2	235	13.4	186	21.5		21.5	229	39.3		21.0	126	32.6		42.8	227	28.1		00.7			
3	250	15.8	201	20.9		22.4	244	40.0		21.8	141	34.8		42.7	242	30.3		00.9			
4	265	18.3	216	20.3		23.4	259	40.7		22.6	156	37.0		42.7	257	32.5		01.0			
5	280	20.8	231	19.7	+18	24.3	274	41.4	+1	23.4	171	39.1	+22	42.7	272	34.7	+1	01.1			
6	295	23.2	246	19.1	+18	25.2	289	42.0	+1	24.1	186	41.3	+22	42.6	287	36.9	+1	01.2			
7	310	25.7	261	18.5		26.1	304	42.7		24.9	201	43.5		42.6	302	39.0		01.3			
8	325	28.2	276	17.9		27.0	319	43.4		25.7	216	45.6		42.6	317	41.2		01.4			
9	340	30.6	291	17.3		27.9	334	44.1		26.5	231	47.8		42.5	332	43.4		01.6			
10	355	33.1	306	16.7		28.8	349	44.8		27.2	246	50.0		42.5	347	45.6		01.7			
11	10	35.6	321	16.0	+18	29.7	4	45.5	+1	28.0	261	52.2	+22	42.5	2	47.8	+1	01.8			
12	25	38.0	336	15.4	+18	30.6	19	46.2	+1	28.8	276	54.3	+22	42.4	17	50.0	+1	01.9			
13	40	40.5	351	14.8		31.5	34	46.9		29.6	291	56.5		42.4	32	52.2		02.0			
14	55	42.9	6	14.2		32.4	49	47.6		30.4	306	58.7		42.4	47	54.4		02.1			
15	70	45.4	21	13.6		33.3	64	48.3		31.1	322	00.8		42.3	62	56.5		02.2			
16	85	47.9	36	13.0		34.2	79	48.9		31.9	337	03.0		42.3	77	58.7		02.4			
17	100	50.3	51	12.4	+18	35.1	94	49.6	+1	32.7	352	05.2	+22	42.3	93	00.9	+1	02.5			
18	115	52.8	66	11.7	+18	36.0	109	50.3	+1	33.5	7	07.3	+22	42.2	108	03.1	+1	02.6			
19	130	55.3	81	11.1		36.9	124	51.0		34.3	22	09.5		42.2	123	05.3		02.7			
20	145	57.7	96	10.5		37.8	139	51.7		35.0	37	11.7		42.2	138	07.5		02.8			
21	161	00.2	111	09.9		38.7	154	52.4		35.8	52	13.8		42.1	153	09.7		02.9			
22	176	02.7	126	09.3		39.6	169	53.1		36.6	67	16.0		42.1	168	11.9		03.0			
23	191	05.1	141	08.7		40.5	184	53.8		37.4	82	18.2		42.1	183	14.0		03.2			
24	206	07.6	156	08.0	+18	41.4	199	54.5	+1	38.2	97	20.3	+22	42.0	198	16.2	+1	03.3			
Dif	—			-6			+9			+7			+8			+22			+1		

UT	SOL				● LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 59.3 ^m				Edad: 29.9 ^d SD: 16'5 PMG: 12 ^h 49 ^m													
					PHE { 4 ^h : 60/5 12 ^h : 60/6 20 ^h : 60/6 Rº: 62 ^m													
	hG ☉	Dec			hG ☾	Dif			Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	08.6	+10	45.3	174	57.3		+17	12.7	142	60 N	19 25	20 13	21 18	4 12 6		22 07 119	
1	195	08.7		46.1	189	24.0			26.9	142	58	19	20 03	21 01	24 12		21 49 110	
2	210	08.9		47.0	203	50.6	76		41.1	142	56	13	19 54	20 47	34 18		35 103	
3	225	09.0		47.9	218	17.0	74	+17	55.1	140	54	08		46	35	44 21	22 98	
4	240	09.1		48.8	232	43.4	74	+18	09.1	140	52	19 03		39	25	52 25	11 95	
5	255	09.3	+10	49.6	247	09.6	72	+18	22.9	138	50	18 58	19 33	20 16	4 59 28		21 01 92	
6	270	09.4	+10	50.5	261	35.7	71	+18	36.6	137	45	18 49	19 20	19 58	5 15 34		20 40 86	
7	285	09.6		51.4	276	01.7	70	+18	50.2	136	40	41	10	44	28 39		24 81	
8	300	09.7		52.3	290	27.6	69	+19	03.7	135	35	35	19 01	32	39 43		20 10 78	
9	315	09.8		53.1	304	53.4	68		17.1	134	30	29	18 54	23	5 49 46		19 58 75	
10	330	10.0		54.0	319	19.1	67		30.4	133	20	19	42	19 08	6 06 52		37 71	
11	345	10.1	+10	54.9	333	44.7	66	+19	43.5	131	10 N	18 11	18 32	18 57	6 21 57		19 20 66	
12	0	10.2	+10	55.7	348	10.1	64	+19	56.5	130	0	18 03	18 24	18 48	6 36 60		19 03 63	
13	15	10.4		56.6	2	35.5	64	+20	09.4	129	10 S	17 55		16	41	6 50 65	18 47 58	
14	30	10.5		57.5	17	00.7	62		22.2	128	20	47	09	35	7 05 70		29 55	
15	45	10.7		58.4	31	25.8	61		34.8	126	30	37	18 02	30	23 75		18 09 50	
16	60	10.8	+10	59.2	45	50.9	61		47.3	125	35	32	17 58	27	34 78		17 57 47	
17	75	10.9	+11	00.1	60	15.8	59	+20	59.7	124	40	17 26	17 54	18 25	7 46 82		17 44 43	
18	90	11.1	+11	01.0	74	40.6	58	+21	11.9	122	45	17 19	17 49	18 23	8 00 87		17 28 39	
19	105	11.2		01.8	89	05.2	56		24.0	120	50	11	44	22	18 93		09 33	
20	120	11.3		02.7	103	29.8	56		36.0	120	52	07	42	21	26 97		17 00 30	
21	135	11.5		03.6	117	54.3	55		47.8	118	54	17 03	39	20	35 101		16 50 26	
22	150	11.6		04.4	132	18.6	53	+21	59.5	117	56	16 59	37	20	46 105		38 22	
23	165	11.7		05.3	146	42.9	53	+22	11.0	115	58	53	34	19	8 58 112		25 16	
24	180	11.9	+11	06.2	161	07.0	51	+22	22.4	114	60 S	16 48	17 31	18 19	9 12 121		16 10 7	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 10 ^h 13.8 ^m			Mag: -3.9 PMG: 13 ^h 36 ^m			Mag: +1.2 PMG: 10 ^h 40 ^m			Mag: -2.1 PMG: 17 ^h 28 ^m			Mag: +0.9 PMG: 10 ^h 45 ^m					
	hG ♈			hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	206	07.6	156	08.0	+18	41.4	199	54.5	+1	38.2	97	20.3	+22	42.0	198	16.2	+1	03.3
1	221	10.1	171	07.4		42.2	214	55.2		38.9	112	22.5		42.0	213	18.4		03.4
2	236	12.5	186	06.8		43.1	229	55.8		39.7	127	24.7		42.0	228	20.6		03.5
3	251	15.0	201	06.2		44.0	244	56.5		40.5	142	26.8		41.9	243	22.8		03.6
4	266	17.4	216	05.6		44.9	259	57.2		41.3	157	29.0		41.9	258	25.0		03.7
5	281	19.9	231	04.9	+18	45.8	274	57.9	+1	42.0	172	31.2	+22	41.9	273	27.2	+1	03.8
6	296	22.4	246	04.3	+18	46.7	289	58.6	+1	42.8	187	33.3	+22	41.8	288	29.4	+1	04.0
7	311	24.8	261	03.7		47.6	304	59.3		43.6	202	35.5		41.8	303	31.5		04.1
8	326	27.3	276	03.1		48.5	320	00.0		44.4	217	37.7		41.8	318	33.7		04.2
9	341	29.8	291	02.4		49.3	335	00.7		45.2	232	39.8		41.7	333	35.9		04.3
10	356	32.2	306	01.8		50.2	350	01.4		45.9	247	42.0		41.7	348	38.1		04.4
11	11	34.7	321	01.2	+18	51.1	5	02.1	+1	46.7	262	44.2	+22	41.7	3	40.3	+1	04.5
12	26	37.2	336	00.6	+18	52.0	20	02.8	+1	47.5	277	46.3	+22	41.6	18	42.5	+1	04.6
13	41	39.6	350	59.9		52.9	35	03.4		48.3	292	48.5		41.6	33	44.7		04.8
14	56	42.1	5	59.3		53.8	50	04.1		49.0	307	50.7		41.5	48	46.9		04.9
15	71	44.6	20	58.7		54.6	65	04.8		49.8	322	52.8		41.5	63	49.0		05.0
16	86	47.0	35	58.1		55.5	80	05.5		50.6	337	55.0		41.5	78	51.2		05.1
17	101	49.5	50	57.4	+18	56.4	95	06.2	+1	51.4	352	57.1	+22	41.4	93	53.4	+1	05.2
18	116	51.9	65	56.8	+18	57.3	110	06.9	+1	52.2	7	59.3	+22	41.4	108	55.6	+1	05.3
19	131	54.4	80	56.2		58.1	125	07.6		52.9	23	01.5		41.4	123	57.8		05.4
20	146	56.9	95	55.6		59.0	140	08.3		53.7	38	03.6		41.3	139	00.0		05.6
21	161	59.3	110	54.9	+18	59.9	155	09.0		54.5	53	05.8		41.3	154	02.2		05.7
22	177	01.8	125	54.3	+19	00.8	170	09.7		55.3	68	08.0		41.3	169	04.4		05.8
23	192	04.3	140	53.7		01.6	185	10.4		56.0	83	10.1		41.2	184	06.5		05.9
24	207	06.7	155	53.0	+19	02.5	200	11.0	+1	56.8	98	12.3	+22	41.2	199	08.7	+1	06.0
Dif	—			-6 +9			+7 +8			+22 0			+22 +1					

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'9 PMG:11 ^h 59.1 ^m				Edad: 1.5 ^d SD: 16'5 PMG: 13 ^h 49 ^m															
	hG ☉ Dec				hG ☾ Dif		Dec Dif		Náutico			Civil			Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	11.9	+11	06.2	161	07.0	+22	22.4	112	60 N	2	40	3	44	4	32	4	17	12	
1	195	12.0		07.0	175	31.1		33.6	111	58	2	57	3	55		39	35	21	23	
2	210	12.2		07.9	189	55.0		44.7	109	56	3	11	4	04	45	4	51	27	23	
3	225	12.3		08.8	204	18.8	+22	55.6	107	54		22	11		50	5	04	31	22	
4	240	12.4		09.6	218	42.6	+23	06.3	106	52		33	18		55	16	35		44	
5	255	12.6	+11	10.5	233	06.2	+23	16.9	105	50	3	42	4	25	4	59	5	26	38	
6	270	12.7	+11	11.4	247	29.7	+23	27.4	103	45	4	00	4	38	5	09	5	48	43	
7	285	12.8		12.2	261	53.1		37.7	101	40		14	48		16	6	06	47	22	
8	300	13.0		13.1	276	16.5		47.8	99	35		26	4	57		23	21	50	21	
9	315	13.1		14.0	290	39.7	+23	57.7	98	30		35	5	04	29	34	53		26	
10	330	13.2		14.8	305	02.8	+24	07.5	96	20	4	50	16		39	6	56	57	21	
11	345	13.4	+11	15.7	319	25.8	+24	17.1	95	10 N	5	01	5	26	5	48	7	16	60	
12	0	13.5	+11	16.5	333	48.8	+24	26.6	92	0	5	10	5	35	5	56	7	35	63	
13	15	13.6		17.4	348	11.6		35.8	91	10 S		18		42	6	04	7	53	66	
14	30	13.8		18.3	2	34.4		44.9	89	20		24		50	12	8	13	70	19	
15	45	13.9		19.1	16	57.0	+24	53.8	88	30		29	5	57	21	37	73		18	
16	60	14.0		20.0	31	19.6	+25	02.6	85	35		32	6	01	27	8	50	76	43	
17	75	14.2	+11	20.9	45	42.1	+25	11.1	84	40	5	34	6	05	6	33	9	06	79	
18	90	14.3	+11	21.7	60	04.5	+25	19.5	82	45	5	36	6	10	6	40	9	25	82	
19	105	14.4		22.6	74	26.8		27.7	80	50		38	15		48	9	50	87	17	
20	120	14.6		23.4	88	49.1		35.7	79	52		38	18		52	10	01	90	28	
21	135	14.7		24.3	103	11.2		43.6	76	54		39	20	6	56	15	93		17	
22	150	14.8		25.2	117	33.3		51.2	74	56		39	23	7	01	30	98		16	
23	165	15.0		26.0	131	55.3	+25	58.6	73	58		40	26		06	10	48	105	39	
24	180	15.1	+11	26.9	146	17.3	+26	05.9		60 S	5	40	6	29	7	12	11	11	116	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 09.9 ^m		Mag: -3.9 PMG: 13 ^h 37 ^m		Mag: +1.3 PMG: 10 ^h 39 ^m		Mag: -2.1 PMG: 17 ^h 25 ^m		Mag: +0.9 PMG: 10 ^h 42 ^m	
h	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
0	207	06.7	155	53.0	+19	02.5	200	11.0	+1	56.8
1	222	09.2	170	52.4		03.4	215	11.7		57.6
2	237	11.7	185	51.8		04.2	230	12.4		58.4
3	252	14.1	200	51.1		05.1	245	13.1		59.1
4	267	16.6	215	50.5		06.0	260	13.8	+1	59.9
5	282	19.0	230	49.9	+19	06.9	275	14.5	+2	00.7
6	297	21.5	245	49.2	+19	07.7	290	15.2	+2	01.5
7	312	24.0	260	48.6		08.6	305	15.9		02.3
8	327	26.4	275	48.0		09.5	320	16.6		03.0
9	342	28.9	290	47.3		10.3	335	17.3		03.8
10	357	31.4	305	46.7		11.2	350	18.0		04.6
11	12	33.8	320	46.1	+19	12.0	5	18.6	+2	05.4
12	27	36.3	335	45.4	+19	12.9	20	19.3	+2	06.1
13	42	38.8	350	44.8		13.8	35	20.0		06.9
14	57	41.2	5	44.2		14.6	50	20.7		07.7
15	72	43.7	20	43.5		15.5	65	21.4		08.5
16	87	46.2	35	42.9		16.3	80	22.1		09.2
17	102	48.6	50	42.3	+19	17.2	95	22.8	+2	10.0
18	117	51.1	65	41.6	+19	18.0	110	23.5	+2	10.8
19	132	53.5	80	41.0		18.9	125	24.2		11.6
20	147	56.0	95	40.3		19.8	140	24.9		12.3
21	162	58.5	110	39.7		20.6	155	25.6		13.1
22	178	00.9	125	39.1		21.5	170	26.3		13.9
23	193	03.4	140	38.4		22.3	185	26.9		14.7
24	208	05.9	155	37.8	+19	23.2	200	27.6	+2	15.4
Dif	—		-6		+9		+7		+8	

UT	SOL			● LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 58.9 ^m			Edad: 2.5 ^d SD: 16'5 PMG: 14 ^h 53 ^m PHE 4^h: 60'5 12^h: 60'5 20^h: 60'3 R°: 67^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°		
h	° /	° /	° /	° /		° /		°		h m	h m	h m	h m m	h m m	h m m				
0	180	15.1	+11	26.9	146	17.3	28	+26	05.9	71	60 N	19 30	20 19	21 26	4 29	34	0 05 104		
1	195	15.2		27.7	160	39.1	28		13.0	68	58	23	20 08	21 08	4 56	44	** ** **		
2	210	15.3		28.6	175	00.9	28		19.8	67	56	17	19 59	20 53	5 18	48	** ** **		
3	225	15.5		29.5	189	22.7	28		26.5	65	54	11	50	40	35	52	** ** **		
4	240	15.6		30.3	203	44.3	26		33.0	63	52	06	43	29	5 51	53	** ** **		
5	255	15.7	+11	31.2	218	06.0	27	+26	39.3	63	50	19 02	19 37	20 20	6 04	55	23 52 66		
6	270	15.9	+11	32.0	232	27.5	25	+26	45.4	61	45	18 52	19 23	20 01	6 31	58	23 22 66		
7	285	16.0		32.9	246	49.0	25		51.3	59	40	43	12	19 46	6 53	60	22 59 66		
8	300	16.1		33.7	261	10.5	25	+26	57.0	57	35	36	19 03	34	7 11	61	40 66		
9	315	16.3		34.6	275	31.8	23	+27	02.4	53	30	30	18 55	24	27 62	22 23 66			
10	330	16.4		35.5	289	53.2	24		07.7	54	20	20	42	19 09	7 53	64	21 55 66		
11	345	16.5	+11	36.3	304	14.5	23	+27	12.8	51	10 N	18 11	18 32	18 57	8 16	65	21 31 66		
12	0	16.6	+11	37.2	318	35.8	23	+27	17.7	49	0	18 02	18 23	18 48	8 38	66	21 09 66		
13	15	16.8		38.0	332	57.0	22		22.4	47	10 S	17 54	15	40	8 59	68	20 46 66		
14	30	16.9		38.9	347	18.2	22		26.9	45	20	45	08	33	9 23	68	20 22 66		
15	45	17.0		39.7	1	39.3	21		31.1	42	30	35	18 00	28	9 50	70	19 54 66		
16	60	17.2		40.6	16	00.4	21		35.2	41	35	30	17 55	25	10 06	71	38 65		
17	75	17.3	+11	41.4	30	21.5	21	+27	39.1	39	40	17 23	17 51	18 23	10 25	71	19 19 65		
18	90	17.4	+11	42.3	44	42.6	21	+27	42.7	36	45	17 16	17 46	18 20	10 47	73	18 55 65		
19	105	17.5		43.1	59	03.6	20		46.1	34	50	07	40	18	11 17	74	26 63		
20	120	17.7		44.0	73	24.6	20		49.4	33	52	17 03	38	17	31	75	18 11 63		
21	135	17.8		44.8	87	45.6	20		52.4	30	54	16 59	35	16	11 48	76	17 54 62		
22	150	17.9		45.7	102	06.6	20		55.2	28	56	54	32	15	12 08	78	34 61		
23	165	18.1		46.5	116	27.6	20	+27	57.8	26	58	48	29	15	12 33	80	17 08 59		
24	180	18.2	+11	47.4	130	48.6	20	+28	00.2	24	60 S	16 42	17 25	18 14	13 07	86	16 34 54		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 10 ^h 05.9 ^m		Mag: -3.9 PMG: 13 ^h 38 ^m		Mag: +1.3 PMG: 10 ^h 38 ^m		Mag: -2.1 PMG: 17 ^h 21 ^m		Mag: +0.9 PMG: 10 ^h 38 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /								
0	208	05.9	155	37.8	+19	23.2	200	27.6	+2	15.4	99	04.1	+22	40.4	200	01.3	+1	08.7
1	223	08.3	170	37.1		24.0	215	28.3		16.2	114	06.2		40.3	215	03.5		08.9
2	238	10.8	185	36.5		24.9	230	29.0		17.0	129	08.4		40.3	230	05.6		09.0
3	253	13.3	200	35.9		25.7	245	29.7		17.8	144	10.5		40.2	245	07.8		09.1
4	268	15.7	215	35.2		26.6	260	30.4		18.5	159	12.7		40.2	260	10.0		09.2
5	283	18.2	230	34.6	+19	27.4	275	31.1	+2	19.3	174	14.8	+22	40.2	275	12.2	+1	09.3
6	298	20.7	245	33.9	+19	28.3	290	31.8	+2	20.1	189	17.0	+22	40.1	290	14.4	+1	09.4
7	313	23.1	260	33.3		29.1	305	32.5		20.9	204	19.1		40.1	305	16.6		09.5
8	328	25.6	275	32.6		29.9	320	33.2		21.6	219	21.3		40.1	320	18.8		09.6
9	343	28.0	290	32.0		30.8	335	33.9		22.4	234	23.4		40.0	335	21.0		09.8
10	358	30.5	305	31.3		31.6	350	34.6		23.2	249	25.6		40.0	350	23.2		09.9
11	13	33.0	320	30.7	+19	32.5	5	35.2	+2	24.0	264	27.7	+22	40.0	5	25.4	+1	10.0
12	28	35.4	335	30.0	+19	33.3	20	35.9	+2	24.7	279	29.9	+22	39.9	20	27.5	+1	10.1
13	43	37.9	350	29.4		34.1	35	36.6		25.5	294	32.0		39.9	35	29.7		10.2
14	58	40.4	5	28.8		35.0	50	37.3		26.3	309	34.2		39.8	50	31.9		10.3
15	73	42.8	20	28.1		35.8	65	38.0		27.1	324	36.3		39.8	65	34.1		10.4
16	88	45.3	35	27.5		36.7	80	38.7		27.8	339	38.5		39.8	80	36.3		10.6
17	103	47.8	50	26.8	+19	37.5	95	39.4	+2	28.6	354	40.6	+22	39.7	95	38.5	+1	10.7
18	118	50.2	65	26.2	+19	38.3	110	40.1	+2	29.4	9	42.8	+22	39.7	110	40.7	+1	10.8
19	133	52.7	80	25.5		39.2	125	40.8		30.2	24	44.9		39.7	125	42.9		10.9
20	148	55.2	95	24.9		40.0	140	41.5		30.9	39	47.1		39.6	140	45.1		11.0
21	163	57.6	110	24.2		40.8	155	42.2		31.7	54	49.2		39.6	155	47.3		11.1
22	179	00.1	125	23.6		41.7	170	42.9		32.5	69	51.4		39.6	170	49.4		11.2
23	194	02.5	140	22.9		42.5	185	43.5		33.3	84	53.5		39.5	185	51.6		11.3
24	209	05.0	155	22.3	+19	43.3	200	44.2	+2	34.0	99	55.7	+22	39.5	200	53.8	+1	11.5
Dif	—		-6		+8		+7		+8		+22		0		+22		+1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG:11 ^h 58.7 ^m				Edad: 3.5 ^d PHE { 4 ^h : 60'2 12 ^h : 60'1 20 ^h : 59'9 SD: 16'4 PMG: 15 ^h 58 ^m R°: 63 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°		Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	180	18.2	+11	47.4	130	48.6	+28	00.2	22	60 N	2 31	3 38	4 26	5 02	77	1 47 59	
1	195	18.3		48.3	145	09.6		02.4	20	58	2 49	49	33	5 38	74	1 11 61	
2	210	18.4		49.1	159	30.5		04.4	20	56	3 04	3 58	40	6 04	73	0 45 62	
3	225	18.6		50.0	173	51.5		06.2	18	54	17	4 06	45	25	72	24 63	
4	240	18.7		50.8	188	12.5		07.7	15	52	27	14	51	43	70	0 07 64	
5	255	18.8	+11	51.7	202	33.5	+28	09.1	14	50	3 37	4 20	4 55	6 58	70	** ** *	
6	270	18.9	+11	52.5	216	54.5	+28	10.2	11	45	3 56	4 34	5 05	7 28	69	** ** *	
7	285	19.1		53.3	231	15.5		11.2	10	40	4 11	45	14	7 51	68	** ** *	
8	300	19.2		54.2	245	36.5		11.9	7	35	23	4 54	21	8 11	67	23 44 55	
9	315	19.3		55.0	259	57.6		12.4	5	30	33	5 02	27	28	66	28 56	
10	330	19.4		55.9	274	18.6		12.7	3	20	4 48	15	38	8 56	66	23 00 58	
11	345	19.6	+11	56.7	288	39.7	+28	12.8	1	10 N	5 00	5 25	5 47	9 20	65	22 36 60	
12	0	19.7	+11	57.6	303	00.9	+28	12.7	1	0	5 10	5 34	5 55	9 43	64	22 14 62	
13	15	19.8		58.4	317	22.0		12.4	3	10 S	18	42	6 04	10 05	63	21 51 64	
14	30	19.9	+11	59.3	331	43.2		11.9	5	20	24	50	13	30	62	21 27 66	
15	45	20.1	+12	00.1	346	04.5		11.1	8	30	30	5 58	23	10	58	20 59 68	
16	60	20.2		01.0	0	25.8		10.2	9	35	33	6 03	28	11	15	60	42 70
17	75	20.3	+12	01.8	14	47.1	+28	09.1	11	40	5 36	6 07	6 35	11	35	58	20 22 72
18	90	20.4	+12	02.7	29	08.5	+28	07.7	14	45	5 38	6 12	6 42	11	59	57	19 58 74
19	105	20.6		03.5	43	29.9		06.2	15	50	40	18	51	12	30	54	28 77
20	120	20.7		04.4	57	51.4		04.5	17	52	41	21	6 56	12	45	53	19 13 78
21	135	20.8		05.2	72	12.9		02.5	20	54	42	23	7 00	13	03	51	18 55 81
22	150	20.9		06.0	86	34.5	+28	00.4	21	56	43	27	05	24	48	33 84	
23	165	21.0		06.9	100	56.1	+27	58.0	24	58	44	30	11	13	52	43	18 06 88
24	180	21.2	+12	07.7	115	17.8	+27	55.5	25	60 S	5 45	6 33	7 17	14	31	35	17 27 98

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG	10 ^h 02.0 ^m	Mag: -3.9	PMG: 13 ^h 39 ^m	Mag: +1.3	PMG: 10 ^h 37 ^m	Mag: -2.1	PMG: 17 ^h 18 ^m	Mag: +0.9	PMG: 10 ^h 35 ^m
h	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	209	05.0	155	22.3	+19	43.3	200	44.2	+22	39.5
1	224	07.5	170	21.6		44.1	215	44.9		39.4
2	239	09.9	185	20.9		45.0	230	45.6		39.4
3	254	12.4	200	20.3		45.8	245	46.3		39.4
4	269	14.9	215	19.6		46.6	260	47.0		39.3
5	284	17.3	230	19.0	+19	47.4	275	47.7	+22	39.3
6	299	19.8	245	18.3	+19	48.3	290	48.4	+22	39.3
7	314	22.3	260	17.7		49.1	305	49.1		39.2
8	329	24.7	275	17.0		49.9	320	49.8		39.2
9	344	27.2	290	16.4		50.7	335	50.5		39.1
10	359	29.7	305	15.7		51.6	350	51.2		39.1
11	14	32.1	320	15.0	+19	52.4	5	51.9	+22	39.1
12	29	34.6	335	14.4	+19	53.2	20	52.5	+22	39.0
13	44	37.0	350	13.7		54.0	35	53.2		39.0
14	59	39.5	5	13.1		54.8	50	53.9		39.0
15	74	42.0	20	12.4		55.6	65	54.6		38.9
16	89	44.4	35	11.8		56.5	80	55.3		38.9
17	104	46.9	50	11.1	+19	57.3	95	56.0	+22	38.8
18	119	49.4	65	10.4	+19	58.1	110	56.7	+22	38.8
19	134	51.8	80	09.8		58.9	125	57.4		38.8
20	149	54.3	95	09.1	+19	59.7	140	58.1		38.7
21	164	56.8	110	08.5	+20	00.5	155	58.8		38.7
22	179	59.2	125	07.8		01.3	170	59.5		38.7
23	195	01.7	140	07.1		02.1	186	00.2		38.6
24	210	04.2	155	06.5	+20	02.9	201	00.9	+22	38.6
Dif	—		-7		+8		+7		+21	0

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG:11 ^h 58.5 ^m				Edad: 4.5 ^d SD: 16'3 PMG: 17 ^h 01 ^m PHE { 4 ^h : 59'7 12 ^h : 59'5 20 ^h : 59'3 Rº: 61 ^m												
	hG ☉	Dec			hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	180	21.2	+12	07.7	115	17.8	+27	55.5	28	60 N	19 35	20 25	21 34	6 19 108	2 46 23		
1	195	21.3		08.6	129	39.6		52.7	29	58	28	13	21 14	6 52 98	2 12 33		
2	210	21.4		09.4	144	01.5		49.8	31	56	21	20 03	20 58	7 17 92	1 47 39		
3	225	21.5		10.3	158	23.4		46.7	34	54	15	19 54	45	37 88	27 42		
4	240	21.7		11.1	172	45.4		43.3	35	52	10	47	34	7 53 85	1 11 44		
5	255	21.8	+12	11.9	187	07.5	+27	39.8	37	50	19 05	19 40	20 24	8 08 82	0 56 47		
6	270	21.9	+12	12.8	201	29.6	+27	36.1	39	45	18 54	19 26	20 04	8 37 78	0 27 50		
7	285	22.0		13.6	215	51.9		32.2	41	40	45	14	19 49	8 59 75	0 04 53		
8	300	22.1		14.5	230	14.2		28.1	43	35	38	19 05	36	9 18 73	** ** *		
9	315	22.3		15.3	244	36.6		23.8	44	30	32	18 56	26	9 34 71	** ** *		
10	330	22.4		16.1	258	59.1		19.4	47	20	20	43	19 10	10 02 67	23 58 **		
11	345	22.5	+12	17.0	273	21.7	+27	14.7	48	10 N	18 11	18 32	18 58	10 25 64	23 36 56		
12	0	22.6	+12	17.8	287	44.4	+27	09.9	51	0	18 02	18 23	18 48	10 47 61	23 16 59		
13	15	22.7		18.7	302	07.1	+27	04.8	51	10 S	17 53	14	39	11 08 59	22 55 63		
14	30	22.9		19.5	316	30.0	+26	59.7	54	20	44	18 06	32	32 56	33 66		
15	45	23.0		20.3	330	52.9		54.3	56	30	33	17 58	26	11 59 52	22 07 70		
16	60	23.1		21.2	345	16.0		48.7	57	35	27	53	23	12 15 50	21 52 72		
17	75	23.2	+12	22.0	359	39.2	+26	43.0	59	40	17 21	17 48	18 20	12 33 48	21 34 76		
18	90	23.3	+12	22.8	14	02.4	+26	37.1	61	45	17 13	17 43	18 17	12 56 43	21 12 80		
19	105	23.5		23.7	28	25.8		31.0	63	50	17 03	37	14	13 24 39	20 45 85		
20	120	23.6		24.5	42	49.3		24.7	64	52	16 59	34	13	38 36	31 88		
21	135	23.7		25.3	57	12.9		18.3	66	54	54	31	12	13 54 32	20 16 91		
22	150	23.8		26.2	71	36.6		11.7	67	56	49	28	11	14 12 29	19 57 96		
23	165	23.9		27.0	86	00.4	+26	05.0	70	58	43	24	10	14 35 23	34 103		
24	180	24.1	+12	27.8	100	24.3	+25	58.0	70	60 S	16 37	17 20	18 09	15 06 12	19 05 113		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 9 ^h 58.1 ^m		Mag: -3.9 PMG: 13 ^h 40 ^m			Mag: +1.3 PMG: 10 ^h 35 ^m			Mag: -2.1 PMG: 17 ^h 14 ^m			Mag: +0.9 PMG: 10 ^h 31 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	210	04.2	155	06.5	+20	02.9	201	00.9	+2	52.6	100	47.2	+22	38.6	201	46.4	
1	225	06.6	170	05.8		03.8	216	01.6		53.4	115	49.3		38.5	216	48.6	
2	240	09.1	185	05.1		04.6	231	02.2		54.1	130	51.4		38.5	231	50.8	
3	255	11.5	200	04.5		05.4	246	02.9		54.9	145	53.6		38.5	246	53.0	
4	270	14.0	215	03.8		06.2	261	03.6		55.7	160	55.7		38.4	261	55.2	
5	285	16.5	230	03.1	+20	07.0	276	04.3	+2	56.4	175	57.9	+22	38.4	276	57.4	
6	300	18.9	245	02.5	+20	07.8	291	05.0	+2	57.2	191	00.0	+22	38.4	291	59.6	
7	315	21.4	260	01.8		08.6	306	05.7		58.0	206	02.1		38.3	307	01.7	
8	330	23.9	275	01.1		09.4	321	06.4		58.8	221	04.3		38.3	322	03.9	
9	345	26.3	290	00.5		10.2	336	07.1	+2	59.5	236	06.4		38.2	337	06.1	
10	0	28.8	304	59.8		11.0	351	07.8	+3	00.3	251	08.6		38.2	352	08.3	
11	15	31.3	319	59.1	+20	11.8	6	08.5	+3	01.1	266	10.7	+22	38.2	7	10.5	
12	30	33.7	334	58.5	+20	12.6	21	09.2	+3	01.8	281	12.8	+22	38.1	22	12.7	
13	45	36.2	349	57.8		13.4	36	09.9		02.6	296	15.0		38.1	37	14.9	
14	60	38.7	4	57.1		14.2	51	10.6		03.4	311	17.1		38.0	52	17.1	
15	75	41.1	19	56.5		14.9	66	11.3		04.2	326	19.2		38.0	67	19.3	
16	90	43.6	34	55.8		15.7	81	11.9		04.9	341	21.4		38.0	82	21.5	
17	105	46.0	49	55.1	+20	16.5	96	12.6	+3	05.7	356	23.5	+22	37.9	97	23.7	
18	120	48.5	64	54.5	+20	17.3	111	13.3	+3	06.5	11	25.7	+22	37.9	112	25.9	
19	135	51.0	79	53.8		18.1	126	14.0		07.2	26	27.8		37.9	127	28.1	
20	150	53.4	94	53.1		18.9	141	14.7		08.0	41	29.9		37.8	142	30.2	
21	165	55.9	109	52.4		19.7	156	15.4		08.8	56	32.1		37.8	157	32.4	
22	180	58.4	124	51.8		20.5	171	16.1		09.5	71	34.2		37.7	172	34.6	
23	196	00.8	139	51.1		21.3	186	16.8		10.3	86	36.3		37.7	187	36.8	
24	211	03.3	154	50.4	+20	22.0	201	17.5	+3	11.1	101	38.5	+22	37.7	202	39.0	
Dif	—		-7			+8	+7			+8	+21		0		+22		+1

UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG:11 ^h 58.3 ^m			Edad: 5.5 ^d SD: 16'1 PMG: 18 ^h 00 ^m														
	hG ☉ Dec			hG ☾ Dif Dec Dif			PHE { 4 ^h : 59'1 12 ^h : 58'9 20 ^h : 58'7 R°: 54 ^m				Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	24.1	+12	27.8	100	24.3	+25	58.0	70	60 N	2 22	3 31	4 20	8 05	109	3 08	7	
1	195	24.2		28.7	114	48.3		51.0	73	58	42	43	28	29	100	2 44	15	
2	210	24.3		29.5	129	12.4		43.7	74	56	2 58	3 53	35	8 48	95	24	21	
3	225	24.4		30.4	143	36.7		36.3	76	54	3 11	4 02	41	9 03	91	2 08	25	
4	240	24.5		31.2	158	01.0		28.7	77	52	22	09	46	17	87	1 54	29	
5	255	24.6	+12	32.0	172	25.5	+25	21.0	77	50	3 32	4 16	4 51	9 29	84	1 42	31	
6	270	24.8	+12	32.8	186	50.1	+25	13.1	79	45	3 52	4 31	5 02	9 53	79	1 16	37	
7	285	24.9		33.7	201	14.8	+25	05.1	80	40	4 08	42	11	10 13	74	0 56	40	
8	300	25.0		34.5	215	39.7	+24	56.9	82	35	20	4 52	18	29	71	39	43	
9	315	25.1		35.3	230	04.6		48.6	83	30	30	5 00	25	10 43	68	0 24	46	
10	330	25.2		36.2	244	29.7		40.1	85	20	47	13	36	11 07	63	**	**	
11	345	25.3	+12	37.0	258	54.9	+24	31.5	86	10 N	4 59	5 24	5 46	11 28	58	**	**	
12	0	25.5	+12	37.8	273	20.2	+24	22.7	88	0	5 09	5 34	5 55	11 47	55	**	**	
13	15	25.6		38.7	287	45.7		13.8	89	10 S	18	42	6 04	12 06	51	23	56	
14	30	25.7		39.5	302	11.2	+24	04.8	90	20	25	51	13	26	47	38	61	
15	45	25.8		40.3	316	36.9	+23	55.6	92	30	31	5 59	24	12 50	42	16	66	
16	60	25.9		41.2	331	02.7		46.3	93	35	34	6 04	30	13 03	40	23	03	
17	75	26.0	+12	42.0	345	28.7	+23	36.8	95	40	5 37	6 09	6 37	13 19	36	22	48	
18	90	26.1	+12	42.8	359	54.7	+23	27.2	96	45	5 40	6 15	6 45	13 38	32	22	31	
19	105	26.3		43.6	14	20.9		17.5	97	50	43	21	54	14 01	26	22	08	
20	120	26.4		44.5	28	47.2	+23	07.7	98	52	44	24	6 59	12	23	21	58	
21	135	26.5		45.3	43	13.6	+22	57.7	100	54	45	27	7 04	25	20	46	90	
22	150	26.6		46.1	57	40.2		47.6	101	56	47	30	09	39	16	32	95	
23	165	26.7		46.9	72	06.9		37.3	103	58	48	34	15	14 56	11	21	16	
24	180	26.8	+12	47.8	86	33.7	+22	27.0	103	60 S	5 49	6 38	7 22	15 17	3	20	56	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 54.2 ^m		Mag: -3.9 PMG: 13 ^h 41 ^m		Mag: +1.3 PMG: 10 ^h 34 ^m		Mag: -2.1 PMG: 17 ^h 11 ^m		Mag: +0.9 PMG: 10 ^h 28 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	211	03.3	154	50.4	+20	22.0	201	17.5	+3	11.1
1	226	05.8	169	49.7		22.8	216	18.2		11.9
2	241	08.2	184	49.1		23.6	231	18.9		12.6
3	256	10.7	199	48.4		24.4	246	19.6		13.4
4	271	13.1	214	47.7		25.2	261	20.3		14.2
5	286	15.6	229	47.0	+20	26.0	276	21.0	+3	14.9
6	301	18.1	244	46.4	+20	26.7	291	21.6	+3	15.7
7	316	20.5	259	45.7		27.5	306	22.3		16.5
8	331	23.0	274	45.0		28.3	321	23.0		17.2
9	346	25.5	289	44.3		29.1	336	23.7		18.0
10	1	27.9	304	43.7		29.8	351	24.4		18.8
11	16	30.4	319	43.0	+20	30.6	6	25.1	+3	19.6
12	31	32.9	334	42.3	+20	31.4	21	25.8	+3	20.3
13	46	35.3	349	41.6		32.2	36	26.5		21.1
14	61	37.8	4	40.9		32.9	51	27.2		21.9
15	76	40.3	19	40.3		33.7	66	27.9		22.6
16	91	42.7	34	39.6		34.5	81	28.6		23.4
17	106	45.2	49	38.9	+20	35.3	96	29.3	+3	24.2
18	121	47.6	64	38.2	+20	36.0	111	30.0	+3	24.9
19	136	50.1	79	37.5		36.8	126	30.7		25.7
20	151	52.6	94	36.9		37.6	141	31.4		26.5
21	166	55.0	109	36.2		38.3	156	32.0		27.2
22	181	57.5	124	35.5		39.1	171	32.7		28.0
23	197	00.0	139	34.8		39.8	186	33.4		28.8
24	212	02.4	154	34.1	+20	40.6	201	34.1	+3	29.5
Dif	—		-7		+8		+7		+8	
							+21		0	
									+22	
									+1	

UT	SOL			 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG:11 ^h 58.1 ^m			Edad: 6.5 ^d PHE $\left\{ \begin{array}{l} 4^h: 58'4 \\ 12^h: 58'2 \\ 20^h: 58'0 \end{array} \right.$ SD: 15'9 PMG: 18 ^h 54 ^m R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	26.8	+12	47.8	86	33.7	79	+22	27.0	60 N	19 40	20 30	21 42		9 54	104
1	195	26.9		48.6	101	00.6	80		16.5	58	32	18	21	10 09	98	2 59
2	210	27.1		49.4	115	27.6	82	+22	05.9	56	25	20 08	21 04	23 93		45 15
3	225	27.2		50.2	129	54.8	83	+21	55.2	54	19	19 59	20 50	34 89		33 18
4	240	27.3		51.1	144	22.1	84		44.4	52	13	51	38	44 86		23 21
5	255	27.4	+12	51.9	158	49.5	84	+21	33.5	50	19 08	19 43	20 28	10 53	83	2 13
6	270	27.5	+12	52.7	173	17.0	85	+21	22.4	45	18 57	19 28	20 07	11 12	77	1 53
7	285	27.6		53.5	187	44.7	87	+21	11.3	40	48	16	19 51	27 73		36 34
8	300	27.7		54.4	202	12.5	88	+21	00.0	35	40	19 06	38	40 69		22 38
9	315	27.8		55.2	216	40.4	89	+20	48.7	30	33	18 58	28	11 51	66	1 10
10	330	28.0		56.0	231	08.4	90		37.2	20	21	44	19 11	12 10	60	0 49
11	345	28.1	+12	56.8	245	36.5	91	+20	25.6	10 N	18 11	18 33	18 58	12 26	56	0 31
12	0	28.2	+12	57.6	260	04.8	93	+20	13.9	0	18 02	18 23	18 47	12 42	51	0 14
13	15	28.3		58.5	274	33.1	93	+20	02.2	10 S	17 52	14	39	12 57	47	** ** *
14	30	28.4	+12	59.3	289	01.6	95	+19	50.3	20	42	18 05	31	13 13	43	** ** *
15	45	28.5	+13	00.1	303	30.2	96		38.3	30	31	17 56	24	32 37		** ** *
16	60	28.6		00.9	317	59.0	98		26.3	35	25	51	21	43 34		** ** *
17	75	28.7	+13	01.7	332	27.8	98	+19	14.1	40	17 18	17 46	18 17	13 55	30	** ** *
18	90	28.8	+13	02.6	346	56.8	100	+19	01.9	45	17 10	17 40	18 14	14 10	26	23 48
19	105	28.9		03.4	1 25.8	100	+18	+18	49.6	50	17 00	33	11	27 21		32 82
20	120	29.1		04.2	15 55.0	102			37.1	52	16 55	30	10	35 18		25 84
21	135	29.2		05.0	30 24.3	103			24.6	54	50	27	08	45 14		16 88
22	150	29.3		05.8	44 53.7	104	+18	+18	12.0	56	44	23	07	14 55	11	23 07
23	165	29.4		06.7	59 23.2	105	+17	+17	59.4	58	38	19	05	15 07	7	22 56
24	180	29.5	+13	07.5	73 52.8	106	+17	+17	46.6	60 S	16 31	17 15	18 04	15 20	3	22 43

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 50.2 ^m		Mag: -3.9 PMG: 13 ^h 42 ^m		Mag: +1.3 PMG: 10 ^h 33 ^m		Mag: -2.0 PMG: 17 ^h 08 ^m		Mag: +0.9 PMG: 10 ^h 24 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	212	02.4	154	34.1	+20	40.6	201	34.1	+3	29.5
1	227	04.9	169	33.4		41.4	216	34.8		30.3
2	242	07.4	184	32.8		42.1	231	35.5		31.1
3	257	09.8	199	32.1		42.9	246	36.2		31.8
4	272	12.3	214	31.4		43.6	261	36.9		32.6
5	287	14.8	229	30.7	+20	44.4	276	37.6	+3	33.4
6	302	17.2	244	30.0	+20	45.2	291	38.3	+3	34.2
7	317	19.7	259	29.3		45.9	306	39.0		34.9
8	332	22.1	274	28.6		46.7	321	39.7		35.7
9	347	24.6	289	27.9		47.4	336	40.4		36.5
10	2	27.1	304	27.3		48.2	351	41.1		37.2
11	17	29.5	319	26.6	+20	48.9	6	41.8	+3	38.0
12	32	32.0	334	25.9	+20	49.7	21	42.4	+3	38.8
13	47	34.5	349	25.2		50.4	36	43.1		39.5
14	62	36.9	4	24.5		51.2	51	43.8		40.3
15	77	39.4	19	23.8		51.9	66	44.5		41.1
16	92	41.9	34	23.1		52.7	81	45.2		41.8
17	107	44.3	49	22.4	+20	53.4	96	45.9	+3	42.6
18	122	46.8	64	21.7	+20	54.2	111	46.6	+3	43.4
19	137	49.3	79	21.0		54.9	126	47.3		44.1
20	152	51.7	94	20.3		55.7	141	48.0		44.9
21	167	54.2	109	19.7		56.4	156	48.7		45.7
22	182	56.6	124	19.0		57.1	171	49.4		46.4
23	197	59.1	139	18.3		57.9	186	50.1		47.2
24	213	01.6	154	17.6	+20	58.6	201	50.8	+3	48.0
Dif	—		-7	+8		+7	+8		+21	0

UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG:11 ^h 57.9 ^m			Edad: 7.5 ^d PHE { 4 ^h : 57'8 12 ^h : 57'5 20 ^h : 57'3 R°: 45 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	29.5	+13	07.5	73	52.8	+17	46.6	60 N	2	13	3	25	4	15	11	36
1	195	29.6		08.3	88	22.6		33.8	58	34	37	23	46	91	3	08	
2	210	29.7		09.1	102	52.4		20.9	56	2	51	48	30	11	54	87	2
3	225	29.8		09.9	117	22.4	+17	07.9	54	3	05	3	57	37	12	02	84
4	240	29.9		10.7	131	52.4	+16	54.9	52	17	4	05	42	09	80	42	15
5	255	30.0	+13	11.5	146	22.6	+16	41.7	50	3	27	4	12	4	48	12	15
6	270	30.1	+13	12.4	160	52.8	+16	28.5	45	3	48	4	27	4	59	12	28
7	285	30.2		13.2	175	23.2		15.3	40	4	05	39	5	08	38	68	2
8	300	30.4		14.0	189	53.6	+16	01.9	35	17	49	16	47	65	1	58	31
9	315	30.5		14.8	204	24.2	+15	48.5	30	28	4	58	23	12	55	61	49
10	330	30.6		15.6	218	54.9		35.0	20	45	5	12	35	13	09	55	33
11	345	30.7	+13	16.4	233	25.6	+15	21.5	10 N	4	58	5	23	5	45	13	21
12	0	30.8	+13	17.2	247	56.5	+15	07.9	0	5	09	5	33	5	55	13	32
13	15	30.9		18.1	262	27.4	+14	54.3	10 S	18	42	6	04	43	41	0	53
14	30	31.0		18.9	276	58.5		40.5	20	25	5	51	14	13	54	37	39
15	45	31.1		19.7	291	29.6		26.8	30	32	6	01	25	14	08	31	22
16	60	31.2		20.5	306	00.9	+14	12.9	35	36	06	32	15	28	12	67	
17	75	31.3	+13	21.3	320	32.2	+13	59.0	40	5	39	6	11	6	39	14	24
18	90	31.4	+13	22.1	335	03.6	+13	45.1	45	5	43	6	17	6	47	14	34
19	105	31.5		22.9	349	35.1		31.1	50	46	24	6	57	46	15	**	**
20	120	31.6		23.7	4	06.7		17.1	52	47	27	7	02	52	13	**	**
21	135	31.7		24.5	18	38.4	+13	03.0	54	49	30	07	14	58	10	**	**
22	150	31.8		25.3	33	10.1	+12	48.8	56	50	34	13	15	05	7	**	**
23	165	31.9		26.1	47	42.0		34.7	58	52	38	19	13	3	**	**	
24	180	32.0	+13	27.0	62	13.9	+12	20.4	60 S	5	53	6	42	7	27	15	21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 46.3 ^m		Mag: -3.9 PMG: 13 ^h 43 ^m		Mag: +1.3 PMG: 10 ^h 32 ^m		Mag: -2.0 PMG: 17 ^h 04 ^m		Mag: +0.9 PMG: 10 ^h 21 ^m	
	hG ♀	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	213	01.6	154	17.6	+20	58.6	201	50.8	+22	35.7
1	228	04.0	169	16.9	+20	59.4	216	51.5		35.7
2	243	06.5	184	16.2	+21	00.1	231	52.2		35.7
3	258	09.0	199	15.5		00.8	246	52.9		35.6
4	273	11.4	214	14.8		01.6	261	53.5		35.6
5	288	13.9	229	14.1	+21	02.3	276	54.2	+3	35.5
6	303	16.4	244	13.4	+21	03.0	291	54.9	+3	35.5
7	318	18.8	259	12.7		03.8	306	55.6		35.5
8	333	21.3	274	12.0		04.5	321	56.3		35.4
9	348	23.7	289	11.3		05.2	336	57.0		35.4
10	3	26.2	304	10.6		06.0	351	57.7		35.3
11	18	28.7	319	09.9	+21	06.7	6	58.4	+3	35.3
12	33	31.1	334	09.2	+21	07.4	21	59.1	+3	35.3
13	48	33.6	349	08.5		08.1	36	59.8		35.2
14	63	36.1	4	07.8		08.9	52	00.5		35.2
15	78	38.5	19	07.1		09.6	67	01.2	+3	35.1
16	93	41.0	34	06.4		10.3	82	01.9	+4	35.1
17	108	43.5	49	05.7	+21	11.0	97	02.6	+4	35.0
18	123	45.9	64	05.0	+21	11.8	112	03.3	+4	35.0
19	138	48.4	79	04.3		12.5	127	04.0		35.0
20	153	50.9	94	03.6		13.2	142	04.6		34.9
21	168	53.3	109	02.9		13.9	157	05.3		34.9
22	183	55.8	124	02.2		14.6	172	06.0		34.8
23	198	58.2	139	01.5		15.3	187	06.7		34.8
24	214	00.7	154	00.8	+21	16.1	202	07.4	+4	34.8
Dif	—		-7	+7			+7	+8	+21	0
										+22
										+1

UT	SOL			LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57.8 ^m			Edad: 8.5 ^d SD: 15'6 PMG: 20 ^h 28 ^m PHE { 4 ^h : 57'1 12 ^h : 56'9 20 ^h : 56'7 R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	32.0	+13 27.0	62	13.9	+12 20.4	142	60 N	19 45	20 36	21 51	13 12 91	3 19 1		
1	195	32.1	27.8	76	45.9 ¹³⁰	+12 06.2	142	58	37	23	28	17 88	13 4		
2	210	32.2	28.6	91	18.0 ¹³¹	+11 51.8	144	56	29	12	21 10	21 85	07 8		
3	225	32.3	29.4	105	50.2 ¹³²	37.5	143	54	22	20 03	20 56	26 81	3 02 10		
4	240	32.4	30.2	120	22.4 ¹³²	23.1	144	52	16	19 54	43	29 79	2 57 13		
5	255	32.6	+13 31.0	134	54.8 ¹³⁴	+11 08.6	145	50	19 11	19 47	20 32	13 33 76	2 53 15		
6	270	32.7	+13 31.8	149	27.2 ¹³⁴	+10 54.2	146	45	18 59	19 31	20 10	13 40 71	2 43 21		
7	285	32.8	32.6	163	59.6 ¹³⁴	39.6	145	40	50	18	19 54	46 67	35 25		
8	300	32.9	33.4	178	32.2 ¹³⁶	25.1	145	35	41	19 08	40	52 63	29 28		
9	315	33.0	34.2	193	04.8 ¹³⁶	+10 10.5	146	30	34	18 59	29	13 56 60	23 31		
10	330	33.1	35.0	207	37.5 ¹³⁷	+9 55.9	146	20	22	45	19 12	14 04 55	12 37		
11	345	33.2	+13 35.8	222	10.2 ¹³⁷	+9 41.3	146	10 N	18 11	18 33	18 58	14 11 50	2 03 41		
12	0	33.3	+13 36.6	236	43.1 ¹³⁹	+9 26.6	147	0	18 01	18 22	18 47	14 18 45	1 54 46		
13	15	33.4	37.4	251	15.9 ¹³⁸	+9 11.9	147	10 S	17 51	13	38	24 41	45 51		
14	30	33.5	38.2	265	48.9 ¹⁴⁰	+8 57.1	147	20	41	18 04	30	31 36	36 55		
15	45	33.6	39.0	280	21.9 ¹⁴⁰	42.4	148	30	29	17 54	22	39 30	25 61		
16	60	33.7	39.8	294	55.0 ¹⁴¹	27.6	148	35	23	49	19	43 27	19 64		
17	75	33.8	+13 40.6	309	28.1 ¹⁴¹	+8 12.8	148	40	17 15	17 43	18 15	14 49 23	1 11 68		
18	90	33.9	+13 41.4	324	01.3 ¹⁴²	+7 57.9	149	45	17 06	17 37	18 11	14 54 20	1 03 72		
19	105	34.0	42.2	338	34.6 ¹⁴³	43.1	148	50	16 56	30	08	15 01 15	0 52 79		
20	120	34.1	43.0	353	07.9 ¹⁴³	28.2	149	52	51	26	06	05 12	48 80		
21	135	34.2	43.8	7	41.3 ¹⁴⁴	+7 13.3	149	54	46	23	04	08 10	42 84		
22	150	34.3	44.6	22	14.7 ¹⁴⁴	+6 58.4	149	56	40	19	03	12 7	36 87		
23	165	34.4	45.4	36	48.2 ¹⁴⁵	43.5	149	58	33	15	18 01	16 4	30 90		
24	180	34.5	+13 46.2	51	21.7 ¹⁴⁵	+6 28.5	150	60 S	16 26	17 10	17 59	15 21 1	0 22 94		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 42.4 ^m		Mag: -3.9 PMG: 13 ^h 45 ^m		Mag: +1.3 PMG: 10 ^h 31 ^m		Mag: -2.0 PMG: 17 ^h 01 ^m		Mag: +0.9 PMG: 10 ^h 17 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	214	00.7	154 00.8	+21 16.1	202 07.4	+4 06.3	104 11.6	+22 34.8	205 17.0	+1 24.8
1	229	03.2	169 00.1	16.8	217 08.1	07.1	119 13.7	34.7	220 19.2	24.9
2	244	05.6	183 59.4	17.5	232 08.8	07.8	134 15.8	34.7	235 21.4	25.0
3	259	08.1	198 58.7	18.2	247 09.5	08.6	149 18.0	34.6	250 23.6	25.1
4	274	10.6	213 57.9	18.9	262 10.2	09.4	164 20.1	34.6	265 25.8	25.2
5	289	13.0	228 57.2	+21 19.6	277 10.9	+4 10.1	179 22.2	+22 34.5	280 28.0	+1 25.3
6	304	15.5	243 56.5	+21 20.3	292 11.6	+4 10.9	194 24.3	+22 34.5	295 30.2	+1 25.4
7	319	18.0	258 55.8	21.0	307 12.3	11.6	209 26.4	34.5	310 32.4	25.6
8	334	20.4	273 55.1	21.7	322 13.0	12.4	224 28.5	34.4	325 34.6	25.7
9	349	22.9	288 54.4	22.5	337 13.7	13.2	239 30.7	34.4	340 36.8	25.8
10	4	25.4	303 53.7	23.2	352 14.4	13.9	254 32.8	34.3	355 39.0	25.9
11	19	27.8	318 53.0	+21 23.9	7 15.1	+4 14.7	269 34.9	+22 34.3	10 41.2	+1 26.0
12	34	30.3	333 52.3	+21 24.6	22 15.8	+4 15.5	284 37.0	+22 34.2	25 43.4	+1 26.1
13	49	32.7	348 51.6	25.3	37 16.4	16.2	299 39.1	34.2	40 45.6	26.2
14	64	35.2	3 50.9	26.0	52 17.1	17.0	314 41.2	34.2	55 47.8	26.3
15	79	37.7	18 50.2	26.7	67 17.8	17.7	329 43.4	34.1	70 50.0	26.4
16	94	40.1	33 49.4	27.4	82 18.5	18.5	344 45.5	34.1	85 52.2	26.5
17	109	42.6	48 48.7	+21 28.1	97 19.2	+4 19.3	359 47.6	+22 34.0	100 54.3	+1 26.6
18	124	45.1	63 48.0	+21 28.8	112 19.9	+4 20.0	14 49.7	+22 34.0	115 56.5	+1 26.8
19	139	47.5	78 47.3	29.5	127 20.6	20.8	29 51.8	34.0	130 58.7	26.9
20	154	50.0	93 46.6	30.2	142 21.3	21.6	44 53.9	33.9	146 00.9	27.0
21	169	52.5	108 45.9	30.9	157 22.0	22.3	59 56.0	33.9	161 03.1	27.1
22	184	54.9	123 45.2	31.5	172 22.7	23.1	74 58.1	33.8	176 05.3	27.2
23	199	57.4	138 44.4	32.2	187 23.4	23.8	90 00.3	33.8	191 07.5	27.3
24	214	59.8	153 43.7	+21 32.9	202 24.1	+4 24.6	105 02.4	+22 33.7	206 09.7	+1 27.4
Dif	—		-7	+7	+7	+8	+21	0	+22	+1

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG:11 ^h 57.6 ^m				Edad: 9.5 ^d PHE { 4 ^h : 56/5 12 ^h : 56/3 20 ^h : 56/2 PMG: 21 ^h 11 ^m R°: 42 ^m														
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	180	34.5	+13	46.2	51	21.7	+6	28.5	150	60 N	2	03	3	18	4	09	14	42	87
1	195	34.6		47.0	65	55.3	+6	13.5	149	58	26	31	18	43	84	16	2		
2	210	34.7		47.8	80	28.9	+5	58.6	150	56	44	42	25	45	80	13	6		
3	225	34.8		48.6	95	02.6		43.6	150	54	2	59	3	52	32	46	78	11	
4	240	34.9		49.4	109	36.3		28.6	151	52	3	12	4	00	38	47	75	09	
5	255	35.0	+13	50.2	124	10.1	+5	13.5	151	50	3	23	4	08	4	44	14	48	73
6	270	35.1	+13	51.0	138	43.9	+4	58.5	150	45	3	45	4	24	4	56	14	50	68
7	285	35.1		51.8	153	17.8		43.5	150	40	4	01	36	5	05	52	63	2	58
8	300	35.2		52.6	167	51.7		28.4	151	35	15	47	14	53	60	55	25		
9	315	35.3		53.4	182	25.6	+4	13.4	151	30	26	4	56	21	55	57	52	28	
10	330	35.4		54.2	196	59.6	+3	58.3	151	20	44	5	11	33	57	51	47	34	
11	345	35.5	+13	55.0	211	33.6	+3	43.3	150	10 N	4	57	5	23	5	44	14	59	47
12	0	35.6	+13	55.8	226	07.7	+3	28.2	151	0	5	08	5	33	5	54	15	01	42
13	15	35.7		56.6	240	41.8	+3	13.1	151	10 S	18	43	6	04	03	38	34	48	
14	30	35.8		57.4	255	15.9	+2	58.1	151	20	26	5	52	15	05	33	30	52	
15	45	35.9		58.1	269	50.1		43.0	151	30	34	6	02	26	08	27	25	57	
16	60	36.0		58.9	284	24.3		27.9	151	35	37	07	33	09	24	22	60		
17	75	36.1	+13	59.7	298	58.5	+2	12.9	150	40	5	41	6	13	6	41	15	11	21
18	90	36.2	+14	00.5	313	32.7	+1	57.8	151	45	5	45	6	19	6	50	15	12	17
19	105	36.3		01.3	328	07.0		42.7	150	50	49	27	7	01	14	13	09	74	
20	120	36.4		02.1	342	41.3		27.7	150	52	50	30	05	15	11	07	76		
21	135	36.5		02.9	357	15.7	+1	12.6	151	54	52	34	11	17	7	04	79		
22	150	36.6		03.7	11	50.0	+0	57.6	150	56	54	38	17	18	5	2	02	81	
23	165	36.7		04.5	26	24.4		42.5	151	58	55	42	24	19	2	1	58	86	
24	180	36.8	+14	05.3	40	58.8	+0	27.5	150	60 S	5	57	6	47	7	31	15	20	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 38.4 ^m		Mag: -3.9 PMG: 13 ^h 46 ^m		Mag: +1.3 PMG: 10 ^h 30 ^m		Mag: -2.0 PMG: 16 ^h 57 ^m		Mag: +0.9 PMG: 10 ^h 14 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	214	59.8	153	43.7	+21	32.9	202	24.1	+4	24.6
1	230	02.3	168	43.0		33.6	217	24.8		25.4
2	245	04.8	183	42.3		34.3	232	25.5		26.1
3	260	07.2	198	41.6		35.0	247	26.2		26.9
4	275	09.7	213	40.9		35.7	262	26.9		27.6
5	290	12.2	228	40.2	+21	36.4	277	27.5	+4	28.4
6	305	14.6	243	39.4	+21	37.1	292	28.2	+4	29.2
7	320	17.1	258	38.7		37.7	307	28.9		29.9
8	335	19.6	273	38.0		38.4	322	29.6		30.7
9	350	22.0	288	37.3		39.1	337	30.3		31.4
10	5	24.5	303	36.6		39.8	352	31.0		32.2
11	20	27.0	318	35.8	+21	40.5	7	31.7	+4	33.0
12	35	29.4	333	35.1	+21	41.1	22	32.4	+4	33.7
13	50	31.9	348	34.4		41.8	37	33.1		34.5
14	65	34.3	3	33.7		42.5	52	33.8		35.2
15	80	36.8	18	33.0		43.2	67	34.5		36.0
16	95	39.3	33	32.2		43.9	82	35.2		36.8
17	110	41.7	48	31.5	+21	44.5	97	35.9	+4	37.5
18	125	44.2	63	30.8	+21	45.2	112	36.6	+4	38.3
19	140	46.7	78	30.1		45.9	127	37.3		39.0
20	155	49.1	93	29.4		46.5	142	38.0		39.8
21	170	51.6	108	28.6		47.2	157	38.6		40.6
22	185	54.1	123	27.9		47.9	172	39.3		41.3
23	200	56.5	138	27.2		48.5	187	40.0		42.1
24	215	59.0	153	26.5	+21	49.2	202	40.7	+4	42.8
Dif	—		-7		+7		+7		+8	

UT	SOL			LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 57.5 ^m			Edad: 10.5 ^d SD: 15'3 PMG: 21 ^h 53 ^m PHE { 4 ^h : 56'0 12 ^h : 55'8 20 ^h : 55'7 R°: 44 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	36.8	+14	05.3	40	58.8	+0	27.5	60 N	19	50	20	42	22	01	16	09
1	195	36.9		06.0	55	33.2	+0	12.4	58	41	29	21	36		07	85	3
2	210	37.0		06.8	70	07.7	-0	02.6	56	33	17	17		05	82	19	6
3	225	37.0		07.6	84	42.2		17.6	54	26	20	07	21	01	04	78	19
4	240	37.1		08.4	99	16.6		32.6	52	20	19	58	20	48		02	76
5	255	37.2	+14	09.2	113	51.1	-0	47.6	50	19	14	19	50	20	36	16	01
6	270	37.3	+14	10.0	128	25.7	-1	02.5	45	19	02	19	34	20	13	15	58
7	285	37.4		10.8	143	00.2		17.5	40	18	52	21	19	56		55	65
8	300	37.5		11.5	157	34.7		32.4	35	43	10	42	53	61		20	26
9	315	37.6		12.3	172	09.3	-1	47.3	30	35	19	01	31		52	57	20
10	330	37.7		13.1	186	43.9	-2	02.2	20	22	18	45	19	12		48	53
11	345	37.8	+14	13.9	201	18.4	-2	17.1	10 N	18	11	18	33	18	58	15	46
12	0	37.9	+14	14.7	215	53.0	-2	32.0	0	18	01	18	22	18	47	15	43
13	15	38.0		15.5	230	27.6	-2	46.8	10 S	17	51	12		37		41	39
14	30	38.1		16.2	245	02.2	-3	01.7	20	40	18	02	29		38	34	22
15	45	38.1		17.0	259	36.8		16.5	30	28	17	52	20		35	29	22
16	60	38.2		17.8	274	11.4		31.3	35	21	47	17		33	27	22	61
17	75	38.3	+14	18.6	288	46.0	-3	46.0	40	17	13	17	41	18	13	15	32
18	90	38.4	+14	19.4	303	20.6	-4	00.7	45	17	03	17	34	18	08	15	29
19	105	38.5		20.2	317	55.3		15.5	50	16	52	26		04		27	14
20	120	38.6		20.9	332	29.9		30.1	52	47	23	02		26	12	23	76
21	135	38.7		21.7	347	04.5		44.8	54	41	19	18	01		24	10	23
22	150	38.8		22.5	1	39.1	-4	59.4	56	35	15	17	59		23	7	23
23	165	38.9		23.3	16	13.7	-5	14.0	58	28	10	57		21	4	24	84
24	180	39.0	+14	24.1	30	48.3	-5	28.6	60 S	16	20	17	05	17	54	15	20

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 9 ^h 34.5 ^m		Mag: -3.9 PMG: 13 ^h 47 ^m			Mag: +1.3 PMG: 10 ^h 29 ^m			Mag: -2.0 PMG: 16 ^h 54 ^m			Mag: +0.9 PMG: 10 ^h 10 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	215	59.0	153	26.5	+21	49.2	202	40.7	+4	42.8	105	53.0	+22	32.7			
1	231	01.4	168	25.7		49.9	217	41.4		43.6	120	55.1		32.6			
2	246	03.9	183	25.0		50.5	232	42.1		44.3	135	57.2		32.6			
3	261	06.4	198	24.3		51.2	247	42.8		45.1	150	59.3		32.6			
4	276	08.8	213	23.6		51.9	262	43.5		45.9	166	01.4		32.5			
5	291	11.3	228	22.8	+21	52.5	277	44.2	+4	46.6	181	03.5	+22	32.5			
6	306	13.8	243	22.1	+21	53.2	292	44.9	+4	47.4	196	05.6	+22	32.4			
7	321	16.2	258	21.4		53.9	307	45.6		48.1	211	07.7		32.4			
8	336	18.7	273	20.6		54.5	322	46.3		48.9	226	09.9		32.3			
9	351	21.2	288	19.9		55.2	337	47.0		49.7	241	12.0		32.3			
10	6	23.6	303	19.2		55.8	352	47.7		50.4	256	14.1		32.3			
11	21	26.1	318	18.5	+21	56.5	7	48.4	+4	51.2	271	16.2	+22	32.2			
12	36	28.6	333	17.7	+21	57.1	22	49.1	+4	51.9	286	18.3	+22	32.2			
13	51	31.0	348	17.0		57.8	37	49.8		52.7	301	20.4		32.1			
14	66	33.5	3	16.3		58.4	52	50.4		53.4	316	22.5		32.1			
15	81	35.9	18	15.5		59.1	67	51.1		54.2	331	24.6		32.0			
16	96	38.4	33	14.8	+21	59.7	82	51.8		55.0	346	26.7		32.0			
17	111	40.9	48	14.1	+22	00.4	97	52.5	+4	55.7	1	28.8	+22	31.9			
18	126	43.3	63	13.3	+22	01.0	112	53.2	+4	56.5	16	30.9	+22	31.9			
19	141	45.8	78	12.6		01.7	127	53.9		57.2	31	33.0		31.9			
20	156	48.3	93	11.9		02.3	142	54.6		58.0	46	35.1		31.8			
21	171	50.7	108	11.1		03.0	157	55.3		58.7	61	37.2		31.8			
22	186	53.2	123	10.4		03.6	172	56.0	+4	59.5	76	39.3		31.7			
23	201	55.7	138	09.7		04.3	187	56.7	+5	00.2	91	41.4		31.7			
24	216	58.1	153	08.9	+22	04.9	202	57.4	+5	01.0	106	43.5	+22	31.6			
Dif	—		-7		+7		+7		+8		+21		0		+22		+1

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG:11 ^h 57.3 ^m			Edad: 11.5 ^d PHE { 4 ^h : 55'5 12 ^h : 55'4 20 ^h : 55'2 R°: 43 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	180	39.0	+14	24.1	30	48.3	-5	28.6	60 N	1	53	3	12	4	04	17	36	89
1	195	39.0		24.8	45	22.9		43.1	58	2	18		25	13		30	85	21
2	210	39.1		25.6	59	57.5	-5	57.6	56		38		37	21		25	81	24
3	225	39.2		26.4	74	32.1	-6	12.1	54	2	53		47	28		21	77	27
4	240	39.3		27.2	89	06.6		26.5	52	3	07	3	56	34		17	75	29
5	255	39.4	+14	27.9	103	41.2	-6	40.9	50	3	18	4	04	4	40	17	13	73
6	270	39.5	+14	28.7	118	15.8	-6	55.3	45	3	41	4	20	4	53	17	05	67
7	285	39.6		29.5	132	50.3	-7	09.6	40	3	58	34		5	03	16	58	64
8	300	39.7		30.3	147	24.8		23.9	35	4	12	45		11		53	60	45
9	315	39.7		31.0	161	59.4		38.2	30		24	4	54	19		48	57	48
10	330	39.8		31.8	176	33.9	-7	52.4	20		42	5	09	32		39	52	54
11	345	39.9	+14	32.6	191	08.3	-8	06.6	10 N	4	56	5	22	5	43	16	32	47
12	0	40.0	+14	33.4	205	42.8	-8	20.7	0	5	08	5	33	5	54	16	25	43
13	15	40.1		34.1	220	17.3		34.8	10 S		18		43	6	04	18	39	
14	30	40.2		34.9	234	51.7	-8	48.9	20		26	5	53	15		11	34	
15	45	40.2		35.7	249	26.1	-9	02.9	30		35	6	03	28		16	03	
16	60	40.3		36.5	264	00.5		16.9	35		39		09	35		15	58	
17	75	40.4	+14	37.2	278	34.9	-9	30.8	40	5	43	6	15	6	43	15	53	
18	90	40.5	+14	38.0	293	09.2	-9	44.7	45	5	47	6	22	6	52	15	47	
19	105	40.6		38.8	307	43.6	-9	58.5	50		51	30		7	04	40	14	
20	120	40.7		39.5	322	17.9	-10	12.3	52		53	33		09		36	12	
21	135	40.8		40.3	336	52.2		26.0	54		55	37		15		33	9	
22	150	40.8		41.1	351	26.4		39.7	56		57	41		21		29	6	
23	165	40.9		41.8	6	00.6	-10	53.3	58	5	59	46		28		24	4	
24	180	41.0	+14	42.6	20	34.8	-11	06.9	60 S	6	01	6	51	7	36	15	19	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 30.6 ^m		Mag: -3.9 PMG: 13 ^h 48 ^m		Mag: +1.3 PMG: 10 ^h 28 ^m		Mag: -2.0 PMG: 16 ^h 51 ^m		Mag: +0.9 PMG: 10 ^h 07 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	216	58.1	153	08.9	+22	04.9	202	57.4	+5	01.0
1	232	00.6	168	08.2		05.6	217	58.1		01.8
2	247	03.0	183	07.5		06.2	232	58.8		02.5
3	262	05.5	198	06.7		06.8	247	59.5		03.3
4	277	08.0	213	06.0		07.5	263	00.2		04.0
5	292	10.4	228	05.3	+22	08.1	278	00.9	+5	04.8
6	307	12.9	243	04.5	+22	08.7	293	01.5	+5	05.5
7	322	15.4	258	03.8		09.4	308	02.2		06.3
8	337	17.8	273	03.1		10.0	323	02.9		07.0
9	352	20.3	288	02.3		10.6	338	03.6		07.8
10	7	22.8	303	01.6		11.3	353	04.3		08.6
11	22	25.2	318	00.8	+22	11.9	8	05.0	+5	09.3
12	37	27.7	333	00.1	+22	12.5	23	05.7	+5	10.1
13	52	30.2	347	59.4		13.2	38	06.4		10.8
14	67	32.6	2	58.6		13.8	53	07.1		11.6
15	82	35.1	17	57.9		14.4	68	07.8		12.3
16	97	37.5	32	57.2		15.0	83	08.5		13.1
17	112	40.0	47	56.4	+22	15.7	98	09.2	+5	13.8
18	127	42.5	62	55.7	+22	16.3	113	09.9	+5	14.6
19	142	44.9	77	54.9		16.9	128	10.6		15.3
20	157	47.4	92	54.2		17.5	143	11.3		16.1
21	172	49.9	107	53.4		18.1	158	12.0		16.9
22	187	52.3	122	52.7		18.8	173	12.6		17.6
23	202	54.8	137	52.0		19.4	188	13.3		18.4
24	217	57.3	152	51.2	+22	20.0	203	14.0	+5	19.1
Dif	—		-7		+6		+7		+8	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57.2 ^m				Edad: 12.5 ^d SD: 15'0 PMG: 23 ^h 18 ^m PHE { 4 ^h : 55'1 12 ^h : 55'0 20 ^h : 54'8 R°: 47 ^m														
	hG ☉	Dec			hG ☾	Dif			Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	41.0	+14	42.6	20	34.8	-11	06.9	136	60 N	19 55	20 48	22 11	19 05	92	3 17	2		
1	195	41.1		43.4	35	09.0		20.5	136	58	46	34	21 43	18 55	87	24	6		
2	210	41.2		44.2	49	43.2		33.9	134	56	37	22	23	46	83	30	9		
3	225	41.3		44.9	64	17.3	-11	47.4	135	54	30	11	21 06	38 80	36	11			
4	240	41.3		45.7	78	51.4	-12	00.7	133	52	23	20 02	20 52	32 77	40	15			
5	255	41.4	+14	46.5	93	25.4	-12	14.1	134	50	19 17	19 54	20 40	18 26	74	3 45	17		
6	270	41.5	+14	47.2	107	59.4	-12	27.3	132	45	19 04	19 37	20 17	18 12	70	3 55	21		
7	285	41.6		48.0	122	33.4		40.5	132	40	18 54	23	19 59	18 02	65	4 03	25		
8	300	41.7		48.8	137	07.4	-12	53.7	132	35	45	12	44	17 53	61	10	29		
9	315	41.7		49.5	151	41.3	-13	06.7	130	30	37	19 02	32	45 58	16	32			
10	330	41.8		50.3	166	15.2		19.8	131	20	23	18 46	19 13	31 54	27	37			
11	345	41.9	+14	51.0	180	49.0	-13	32.7	129	10 N	18 11	18 33	18 59	17 19	50	4 37	40		
12	0	42.0	+14	51.8	195	22.8	-13	45.6	129	0	18 01	18 22	18 47	17 08	46	4 45	45		
13	15	42.1		52.6	209	56.6	-13	58.5	128	10 S	17 50	12	37	16 57	42	4 54	49		
14	30	42.1		53.3	224	30.3	-14	11.3	128	20	39	18 01	27	45 38	5	04	53		
15	45	42.2		54.1	239	04.0		24.0	127	30	26	17 51	19	32 33	15	59			
16	60	42.3		54.9	253	37.7		36.6	126	35	18	45	15	24 31	22	61			
17	75	42.4	+14	55.6	268	11.3	-14	49.2	126	40	17 10	17 38	18 10	16 16	27	5 29	65		
18	90	42.5	+14	56.4	282	44.9	-15	01.7	125	45	17 00	17 31	18 06	16 06	23	5 37	69		
19	105	42.5		57.1	297	18.4		14.2	125	50	16 49	23	18 01	15 54	18	48	74		
20	120	42.6		57.9	311	51.9		26.5	123	52	43	19	17 59	48 16	53	76			
21	135	42.7		58.7	326	25.3		38.9	124	54	37	15	57	42 13	5 58	79			
22	150	42.8	+14	59.4	340	58.7	-15	51.1	122	56	31	11	55	35 10	6 04	83			
23	165	42.9	+15	00.2	355	32.1	-16	03.3	122	58	23	06	52	28 6	11	86			
24	180	42.9	+15	00.9	10	05.4	-16	15.4	121	60 S	16 15	17 00	17 50	15 19	2	6 18	91		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 26.6 ^m		Mag: -3.9 PMG: 13 ^h 49 ^m		Mag: +1.3 PMG: 10 ^h 27 ^m		Mag: -2.0 PMG: 16 ^h 47 ^m		Mag: +0.9 PMG: 10 ^h 03 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	217	57.3	152	51.2	+22	20.0	107	33.9	+22	30.5
1	232	59.7	167	50.5		20.6	122	36.0		30.5
2	248	02.2	182	49.7		21.2	137	38.1		30.4
3	263	04.7	197	49.0		21.8	152	40.2		30.4
4	278	07.1	212	48.2		22.5	167	42.3		30.3
5	293	09.6	227	47.5	+22	23.1	182	44.3	+22	30.3
6	308	12.0	242	46.7	+22	23.7	197	46.4	+22	30.3
7	323	14.5	257	46.0		24.3	212	48.5		30.2
8	338	17.0	272	45.3		24.9	227	50.6		30.2
9	353	19.4	287	44.5		25.5	242	52.7		30.1
10	8	21.9	302	43.8		26.1	257	54.8		30.1
11	23	24.4	317	43.0	+22	26.7	272	56.9	+22	30.0
12	38	26.8	332	42.3	+22	27.3	287	59.0	+22	30.0
13	53	29.3	347	41.5		27.9	303	01.1		29.9
14	68	31.8	2	40.8		28.5	318	03.2		29.9
15	83	34.2	17	40.0		29.1	333	05.3		29.8
16	98	36.7	32	39.3		29.7	348	07.4		29.8
17	113	39.1	47	38.5	+22	30.3	3	09.5	+22	29.7
18	128	41.6	62	37.8	+22	30.9	18	11.6	+22	29.7
19	143	44.1	77	37.0		31.5	33	13.7		29.7
20	158	46.5	92	36.3		32.1	48	15.7		29.6
21	173	49.0	107	35.5		32.7	63	17.8		29.6
22	188	51.5	122	34.8		33.3	78	19.9		29.5
23	203	53.9	137	34.0		33.9	93	22.0		29.5
24	218	56.4	152	33.3	+22	34.5	108	24.1	+22	29.4
Dif	—		-7		+6		+21		0	
									+22	
										+1

UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG:11 ^h 57.1 ^m			Edad: 13.5 ^d PHE { 4 ^h : 54'7 12 ^h : 54'6 20 ^h : 54'5 R°: *** ^m PMG: **h *** ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	180	42.9	+15	00.9	10	05.4	-16	15.4	60 N	1	43	3	05	3	58	20	
1	195	43.0		01.7	24	38.7 ¹⁴³		27.4 ¹²⁰	58	2	10		20	4	08	21	
2	210	43.1		02.5	39	11.9 ¹⁴²		39.3 ¹¹⁹	56	31		32	16	20	08	82	
3	225	43.2		03.2	53	45.1 ¹⁴²	-16	51.2 ¹¹⁹	54	2	47		42	24	19	57	
4	240	43.2		04.0	68	18.2 ¹⁴¹	-17	03.0 ¹¹⁸	52	3	01	3	52	30	47	75	
5	255	43.3	+15	04.7	82	51.3 ¹⁴¹	-17	14.7 ¹¹⁷	50	3	13	4	00	4	37	19	
6	270	43.4	+15	05.5	97	24.3 ¹⁴⁰	-17	26.4 ¹¹⁷	45	3	37	4	17	4	50	19	
7	285	43.5		06.2	111	57.3 ¹⁴⁰		37.9 ¹¹⁵	40	3	55	31		5	00	19	
8	300	43.5		07.0	126	30.3 ¹⁴⁰	-17	49.4 ¹¹⁵	35	4	10		42	09	18	53	
9	315	43.6		07.7	141	03.2 ¹³⁹	-18	00.8 ¹¹⁴	30		22	4	52	17	42	58	
10	330	43.7		08.5	155	36.0 ¹³⁸		12.2 ¹¹⁴	20		41	5	08	31	23	54	
11	345	43.8	+15	09.3	170	08.8 ¹³⁸	-18	23.4 ¹¹²	10 N	4	55	5	21	5	43	18	
12	0	43.8	+15	10.0	184	41.5 ¹³⁷	-18	34.6 ¹¹²	0	5	07	5	32	5	54	17	
13	15	43.9		10.8	199	14.2 ¹³⁷		45.7 ¹¹¹	10 S		18		43	6	05	38	
14	30	44.0		11.5	213	46.8 ¹³⁶	-18	56.7 ¹¹⁰	20		27	5	53	16	22	40	
15	45	44.1		12.3	228	19.4 ¹³⁶	-19	07.6 ¹⁰⁹	30		36	6	04	29	17	04	
16	60	44.1		13.0	242	52.0 ¹³⁶		18.4 ¹⁰⁸	35		40		10	36	16	53	
17	75	44.2	+15	13.8	257	24.4 ¹³⁴	-19	29.1 ¹⁰⁷	40	5	45	6	17	6	45	16	
18	90	44.3	+15	14.5	271	56.9 ¹³⁵	-19	39.8 ¹⁰⁷	45	5	49	6	24	6	55	16	
19	105	44.4		15.3	286	29.2 ¹³³	-19	50.4 ¹⁰⁶	50		54		32	7	07	11	
20	120	44.4		16.0	301	01.6 ¹³⁴	-20	00.8 ¹⁰⁴	52		56		36	12	16	03	
21	135	44.5		16.8	315	33.8 ¹³²		11.2 ¹⁰³	54	5	58		40	18	15	54	
22	150	44.6		17.5	330	06.0 ¹³²		21.5 ¹⁰⁴	56	6	00		45	25	44	13	
23	165	44.6		18.3	344	38.2 ¹³²		31.7 ¹⁰²	58		03		50	32	33	8	
24	180	44.7	+15	19.0	359	10.3 ¹³¹	-20	41.8 ¹⁰¹	60 S	6	05	6	55	7	41	15	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 22.7 ^m		Mag: -3.9 PMG: 13 ^h 50 ^m		Mag: +1.3 PMG: 10 ^h 25 ^m		Mag: -2.0 PMG: 16 ^h 44 ^m		Mag: +0.9 PMG: 10 ^h 00 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	218	56.4	152	33.3	+22	34.5	203	30.7	+5	37.2	108	24.1	+22	29.4	209	40.9	+1	37.7
1	233	58.9	167	32.5		35.1	218	31.4		37.9	123	26.2		29.4	224	43.1		37.8
2	249	01.3	182	31.8		35.7	233	32.1		38.7	138	28.3		29.3	239	45.3		37.9
3	264	03.8	197	31.0		36.2	248	32.8		39.4	153	30.4		29.3	254	47.5		38.0
4	279	06.3	212	30.3		36.8	263	33.5		40.2	168	32.5		29.2	269	49.8		38.1
5	294	08.7	227	29.5	+22	37.4	278	34.1	+5	40.9	183	34.6	+22	29.2	284	52.0	+1	38.2
6	309	11.2	242	28.7	+22	38.0	293	34.8	+5	41.7	198	36.6	+22	29.1	299	54.2	+1	38.3
7	324	13.6	257	28.0		38.6	308	35.5		42.4	213	38.7		29.1	314	56.4		38.4
8	339	16.1	272	27.2		39.2	323	36.2		43.2	228	40.8		29.0	329	58.6		38.5
9	354	18.6	287	26.5		39.7	338	36.9		43.9	243	42.9		29.0	345	00.8		38.6
10	9	21.0	302	25.7		40.3	353	37.6		44.7	258	45.0		28.9	0	03.0		38.7
11	24	23.5	317	25.0	+22	40.9	8	38.3	+5	45.4	273	47.1	+22	28.9	15	05.2	+1	38.9
12	39	26.0	332	24.2	+22	41.5	23	39.0	+5	46.2	288	49.2	+22	28.8	30	07.4	+1	39.0
13	54	28.4	347	23.5		42.1	38	39.7		46.9	303	51.3		28.8	45	09.6		39.1
14	69	30.9	2	22.7		42.6	53	40.4		47.7	318	53.4		28.8	60	11.8		39.2
15	84	33.4	17	21.9		43.2	68	41.1		48.4	333	55.4		28.7	75	14.0		39.3
16	99	35.8	32	21.2		43.8	83	41.8		49.1	348	57.5		28.7	90	16.2		39.4
17	114	38.3	47	20.4	+22	44.4	98	42.5	+5	49.9	3	59.6	+22	28.6	105	18.4	+1	39.5
18	129	40.8	62	19.7	+22	44.9	113	43.2	+5	50.6	19	01.7	+22	28.6	120	20.6	+1	39.6
19	144	43.2	77	18.9		45.5	128	43.8		51.4	34	03.8		28.5	135	22.8		39.7
20	159	45.7	92	18.1		46.1	143	44.5		52.1	49	05.9		28.5	150	25.0		39.8
21	174	48.1	107	17.4		46.6	158	45.2		52.9	64	08.0		28.4	165	27.2		39.9
22	189	50.6	122	16.6		47.2	173	45.9		53.6	79	10.0		28.4	180	29.4		40.0
23	204	53.1	137	15.9		47.8	188	46.6		54.4	94	12.1		28.3	195	31.6		40.1
24	219	55.5	152	15.1	+22	48.3	203	47.3	+5	55.1	109	14.2	+22	28.3	210	33.8	+1	40.2
Dif	—		-8		+6		+7		+7		+21		0		+22		+1	

UT	SOL		LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57.0 ^m		Edad: 14.5 ^d SD: 14'8 PMG: 0 ^h 03 ^m PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3 R°: 49 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /		° /		°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m	
0	180	44.7	+15	19.0	359	10.3	-20	41.8	60 N	20 00	20 55	22 22	22 09	92	3 19	6
1	195	44.8		19.8	13	42.4 ¹³¹	-20	51.8 ¹⁰⁰	58	19 50	39	21 51	21 47	84	35	12
2	210	44.9		20.5	28	14.4 ¹³⁰	-21	01.8 ⁹⁸	56	41	26	29	30	79	3 48	17
3	225	44.9		21.3	42	46.3 ¹²⁹		11.6 ⁹⁸	54	33	15	21 12	15	75	4 00	20
4	240	45.0		22.0	57	18.2 ¹²⁹		21.3 ⁹⁷	52	26	20 06	20 57	21 02	73	10	23
5	255	45.1	+15	22.7	71	50.0 ¹²⁸	-21	30.9 ⁹⁶	50	19 20	19 57	20 45	20 51	70	4 19	26
6	270	45.1	+15	23.5	86	21.8 ¹²⁸	-21	40.5 ⁹⁴	45	19 07	19 39	20 20	20 27	67	4 39	30
7	285	45.2		24.2	100	53.5 ¹²⁷		49.9 ⁹⁶	40	18 56	25	20 01	20 09	63	4 55	34
8	300	45.3		25.0	115	25.2 ¹²⁷	-21	59.2 ⁹³	35	46	13	19 46	19 53	61	5 08	37
9	315	45.4		25.7	129	56.8 ¹²⁶	-22	08.5 ⁹³	30	38	19 03	34	40	59	20	39
10	330	45.4		26.5	144	28.4 ¹²⁶		17.6 ⁹¹	20	24	18 47	19 14	19 17	55	40	43
11	345	45.5	+15	27.2	158	59.9 ¹²⁵	-22	26.7 ⁸⁹	10 N	18 12	18 34	18 59	18 57	53	5 58	46
12	0	45.6	+15	28.0	173	31.3 ¹²⁴	-22	35.6 ⁸⁸	0	18 00	18 22	18 47	18 39	50	6 15	49
13	15	45.6		28.7	188	02.7 ¹²⁴		44.4 ⁸⁷	10 S	17 49	11	36	21	48	31	52
14	30	45.7		29.4	202	34.0 ¹²³	-22	53.1 ⁸⁷	20	37	18 00	26	18 02	45	6 49	56
15	45	45.8		30.2	217	05.3 ¹²³	-23	01.8 ⁸⁷	30	24	17 49	17	17 39	42	7 10	59
16	60	45.8		30.9	231	36.6 ¹²³		10.3 ⁸⁵	35	16	43	13	26	40	22	61
17	75	45.9	+15	31.7	246	07.7 ¹²¹	-23	18.7 ⁸⁴	40	17 08	17 36	18 08	17 12	37	7 36	64
18	90	46.0	+15	32.4	260	38.9 ¹²²	-23	27.0 ⁸³	45	16 57	17 28	18 03	16 54	34	7 53	67
19	105	46.0		33.1	275	09.9 ¹²⁰		35.2 ⁸²	50	45	20	17 58	32	30	8 13	73
20	120	46.1		33.9	289	40.9 ¹²⁰		43.3 ⁸¹	52	40	16	56	22	27	23	75
21	135	46.2		34.6	304	11.9 ¹²⁰		51.2 ⁷⁹	54	33	11	53	16 10	25	34	78
22	150	46.2		35.4	318	42.8 ¹¹⁹	-23	59.1 ⁷⁹	56	26	07	51	15 57	21	8 47	82
23	165	46.3		36.1	333	13.7 ¹¹⁹	-24	06.8 ⁷⁷	58	19	17 01	48	41	17	9 02	86
24	180	46.4	+15	36.8	347	44.5 ¹¹⁸	-24	14.5 ⁷⁷	60 S	16 10	16 56	17 45	15 23	9	9 19	94
UT	ARIES PMG 9 ^h 18.8 ^m		VENUS Mag: -3.9 PMG: 13 ^h 52 ^m		MARTE Mag: +1.3 PMG: 10 ^h 24 ^m		JÚPITER Mag: -2.0 PMG: 16 ^h 41 ^m		SATURNO Mag: +0.9 PMG: 9 ^h 56 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	° /	° /	° /		° /		° /		° /							
0	219	55.5	152	15.1	+22	48.3	203	47.3	+5	55.1						
1	234	58.0	167	14.3		48.9	218	48.0		55.9						
2	250	00.5	182	13.6		49.5	233	48.7		56.6						
3	265	02.9	197	12.8		50.0	248	49.4		57.4						
4	280	05.4	212	12.1		50.6	263	50.1		58.1						
5	295	07.9	227	11.3	+22	51.1	278	50.8	+5	58.9						
6	310	10.3	242	10.5	+22	51.7	293	51.5	+5	59.6						
7	325	12.8	257	09.8		52.3	308	52.2	+6	00.4						
8	340	15.2	272	09.0		52.8	323	52.9		01.1						
9	355	17.7	287	08.2		53.4	338	53.5		01.9						
10	10	20.2	302	07.5		53.9	353	54.2		02.6						
11	25	22.6	317	06.7	+22	54.5	8	54.9	+6	03.3						
12	40	25.1	332	05.9	+22	55.0	23	55.6	+6	04.1						
13	55	27.6	347	05.2		55.6	38	56.3		04.8						
14	70	30.0	2	04.4		56.1	53	57.0		05.6						
15	85	32.5	17	03.7		56.7	68	57.7		06.3						
16	100	35.0	32	02.9		57.2	83	58.4		07.1						
17	115	37.4	47	02.1	+22	57.8	98	59.1	+6	07.8						
18	130	39.9	62	01.4	+22	58.3	113	59.8	+6	08.6						
19	145	42.4	77	00.6		58.9	129	00.5		09.3						
20	160	44.8	91	59.8		59.4	144	01.2		10.1						
21	175	47.3	106	59.1	+22	59.9	159	01.9		10.8						
22	190	49.7	121	58.3	+23	00.5	174	02.6		11.5						
23	205	52.2	136	57.5		01.0	189	03.2		12.3						
24	220	54.7	151	56.7	+23	01.6	204	03.9	+6	13.0						
Dif	—		-8		+6		+7		+7							
									+21	0						
										+22						
										+1						

UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna	
	SD: 15'9 PMG:11 ^h 56.9 ^m			Edad: 15.5 ^d PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1 PMG: 0 ^h 51 ^m R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	h	m
0	180	46.4	+15	36.8	347	44.5	-24	14.5	75	60 N	1	31	2	58	3	53	23	40
1	195	46.4		37.6		2	15.2		22.0	58	2	02	3	14	4	03	23	10
2	210	46.5		38.3		16	45.9		29.4	56		24	27	12	22	47	67	4
3	225	46.6		39.0		31	16.6		36.7	54		42	38	20	29	65	19	28
4	240	46.6		39.8		45	47.2		43.9	52		2	56	47	27	13	63	32
5	255	46.7	+15	40.5	60	17.7	-24	51.0	71	50		3	09	3	56	4	33	22
6	270	46.8	+15	41.2	74	48.2	-24	58.0	70	45		3	33	4	14	4	47	21
7	285	46.8		42.0	89	18.7	-25	04.8	68	40		3	52	28	4	58	21	10
8	300	46.9		42.7	103	49.0		11.5	67	35		4	07	40	5	07	20	53
9	315	47.0		43.4	118	19.4		18.1	66	30		20	4	50	16	37	55	5
10	330	47.0		44.2	132	49.7		24.6	65	20		39	5	07	30	20	11	54
11	345	47.1	+15	44.9	147	19.9	-25	31.0	64	10 N		4	55	5	20	5	42	19
12	0	47.2	+15	45.6	161	50.2	-25	37.2	62	0		5	07	5	32	5	53	19
13	15	47.2		46.4	176	20.3		43.4	60	10 S		18		43	6	05	19	07
14	30	47.3		47.1	190	50.4		49.4	59	20		28	5	54	17	18	45	48
15	45	47.3		47.8	205	20.5	-25	55.3	57	30		37	6	05	30	20	45	8
16	60	47.4		48.6	219	50.5	-26	01.0	57	35		42	12	38	18	05	44	22
17	75	47.5	+15	49.3	234	20.5	-26	06.7	57	40		5	46	6	18	6	47	17
18	90	47.5	+15	50.0	248	50.4	-26	12.2	55	45		5	51	6	26	6	57	17
19	105	47.6		50.8	263	20.3		17.6	54	50		57	35	7	09	17	00	38
20	120	47.6		51.5	277	50.2		22.8	52	52		5	59	39	15	16	48	36
21	135	47.7		52.2	292	20.0		28.0	52	54		6	01	44	22	33	34	9
22	150	47.8		52.9	306	49.7		33.0	50	56		04	48	29	16	16	31	10
23	165	47.8		53.7	321	19.5		37.9	49	58		07	54	37	15	56	27	78
24	180	47.9	+15	54.4	335	49.2	-26	42.7	48	60 S		6	09	6	59	7	46	15

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 9 ^h 14.8 ^m		Mag: -3.9 PMG: 13 ^h 53 ^m			Mag: +1.3 PMG: 10 ^h 23 ^m			Mag: -2.0 PMG: 16 ^h 37 ^m			Mag: +0.9 PMG: 9 ^h 53 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	220	54.7	151	56.7	+23	01.6	204	03.9	+6	13.0	110	04.2	+22	27.1				
1	235	57.1	166	56.0		02.1	219	04.6		13.8	125	06.3		27.1				
2	250	59.6	181	55.2		02.6	234	05.3		14.5	140	08.4		27.0				
3	266	02.1	196	54.4		03.2	249	06.0		15.3	155	10.4		27.0				
4	281	04.5	211	53.7		03.7	264	06.7		16.0	170	12.5		26.9				
5	296	07.0	226	52.9	+23	04.2	279	07.4	+6	16.8	185	14.6	+22	26.9				
6	311	09.5	241	52.1	+23	04.8	294	08.1	+6	17.5	200	16.7	+22	26.8				
7	326	11.9	256	51.4		05.3	309	08.8		18.2	215	18.8		26.8				
8	341	14.4	271	50.6		05.8	324	09.5		19.0	230	20.8		26.7				
9	356	16.9	286	49.8		06.4	339	10.2		19.7	245	22.9		26.7				
10	11	19.3	301	49.0		06.9	354	10.9		20.5	260	25.0		26.6				
11	26	21.8	316	48.3	+23	07.4	9	11.6	+6	21.2	275	27.1	+22	26.6				
12	41	24.2	331	47.5	+23	07.9	24	12.2	+6	22.0	290	29.1	+22	26.5				
13	56	26.7	346	46.7		08.5	39	12.9		22.7	305	31.2		26.5				
14	71	29.2	1	45.9		09.0	54	13.6		23.4	320	33.3		26.4				
15	86	31.6	16	45.2		09.5	69	14.3		24.2	335	35.4		26.4				
16	101	34.1	31	44.4		10.0	84	15.0		24.9	350	37.5		26.3				
17	116	36.6	46	43.6	+23	10.6	99	15.7	+6	25.7	5	39.5	+22	26.3				
18	131	39.0	61	42.8	+23	11.1	114	16.4	+6	26.4	20	41.6	+22	26.2				
19	146	41.5	76	42.1		11.6	129	17.1		27.2	35	43.7		26.2				
20	161	44.0	91	41.3		12.1	144	17.8		27.9	50	45.8		26.1				
21	176	46.4	106	40.5		12.6	159	18.5		28.6	65	47.8		26.1				
22	191	48.9	121	39.7		13.1	174	19.2		29.4	80	49.9		26.0				
23	206	51.3	136	39.0		13.6	189	19.9		30.1	95	52.0		26.0				
24	221	53.8	151	38.2	+23	14.2	204	20.6	+6	30.9	110	54.1	+22	25.9				
Dif	—		-8		+5		+7		+7		+21		0		+22			+1

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG:11 ^h 56.8 ^m				Edad: 16.5 ^d SD: 14'7 PMG: 1 ^h 40 ^m								Civil		Náutico	Hora	R°	Hora	R°			
	hG ☉		Dec		hG ☾		Dif		Dec				Dif									
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	180	47.9	+15	54.4	335	49.2	-26	42.7	46	60 N	20 05	21 01	22 34	**	**	**	3	35	29			
1	195	48.0		55.1	350	18.8		47.3	45	58	19 55	20 45	22 00	**	**	**	4	05	36			
2	210	48.0		55.8	4	48.4		51.8	44	56	45	31	21 36	23	54	53	28	40				
3	225	48.1		56.6	19	18.0	-26	56.2	44	54	37	20	17	34	52	4	47	42				
4	240	48.1		57.3	33	47.6	-27	00.4	42	52	30	09	21 02	16	53	5	03	43				
5	255	48.2	+15	58.0	48	17.1	-27	04.6	42	50	19 23	20 01	20 49	23	01	53	5	16	45			
6	270	48.2	+15	58.7	62	46.5	-27	08.6	40	45	19 09	19 42	20 23	22	31	53	5	44	47			
7	285	48.3	+15	59.5	77	16.0		12.4	38	40	18 58	27	20 04	22	08	53	6	07	47			
8	300	48.4	+16	00.2	91	45.4		16.2	38	35	48	15	19 48	21	49	53	25	49				
9	315	48.4		00.9	106	14.8		19.8	36	30	39	19 05	35	32	53	6	41	49				
10	330	48.5		01.6	120	44.1		23.3	35	20	25	18 48	15	21	05	53	7	08	50			
11	345	48.5	+16	02.4	135	13.5	-27	26.6	33	10 N	18 12	18 34	19 00	20	41	53	7	31	51			
12	0	48.6	+16	03.1	149	42.8	-27	29.8	32	0	18 00	18 22	18 47	20	19	52	7	52	53			
13	15	48.7		03.8	164	12.0		32.9	31	10 S	17 49	18 10	36	19	56	53	8	14	53			
14	30	48.7		04.5	178	41.3		35.8	29	20	36	17 59	25	33	52	8	37	54				
15	45	48.8		05.2	193	10.5		38.7	29	30	22	47	16	19	05	52	9	04	55			
16	60	48.8		06.0	207	39.7		41.3	26	35	14	41	11	18	49	52	20	56				
17	75	48.9	+16	06.7	222	08.9	-27	43.9	26	40	17 05	17 34	18 06	18	30	52	9	39	56			
18	90	48.9	+16	07.4	236	38.0	-27	46.3	24	45	16 55	17 26	18 01	18	07	51	10	01	57			
19	105	49.0		08.1	251	07.2		48.6	23	50	42	16	17 55	17	38	50	30	58				
20	120	49.0		08.8	265	36.3		50.7	21	52	36	12	53	24	50	10	44	59				
21	135	49.1		09.5	280	05.4		52.7	20	54	29	08	50	17	07	49	11	01	59			
22	150	49.2		10.3	294	34.4		54.6	19	56	22	17 03	47	16	47	49	20	61				
23	165	49.2		11.0	309	03.5		56.4	18	58	14	16 57	44	16	23	47	11	45	62			
24	180	49.3	+16	11.7	323	32.5	-27	58.0	16	60 S	16 05	16 51	17 41	15	50	43	12	18	66			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 10.9 ^m		Mag: -3.9 PMG: 13 ^h 54 ^m		Mag: +1.3 PMG: 10 ^h 22 ^m		Mag: -2.0 PMG: 16 ^h 34 ^m		Mag: +0.9 PMG: 9 ^h 49 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	221	53.8	151	38.2	+23	14.2	204	20.6	+6	30.9
1	236	56.3	166	37.4		14.7	219	21.2		31.6
2	251	58.7	181	36.6		15.2	234	21.9		32.3
3	267	01.2	196	35.9		15.7	249	22.6		33.1
4	282	03.7	211	35.1		16.2	264	23.3		33.8
5	297	06.1	226	34.3	+23	16.7	279	24.0	+6	34.6
6	312	08.6	241	33.5	+23	17.2	294	24.7	+6	35.3
7	327	11.1	256	32.7		17.7	309	25.4		36.0
8	342	13.5	271	32.0		18.2	324	26.1		36.8
9	357	16.0	286	31.2		18.7	339	26.8		37.5
10	12	18.5	301	30.4		19.2	354	27.5		38.3
11	27	20.9	316	29.6	+23	19.7	9	28.2	+6	39.0
12	42	23.4	331	28.8	+23	20.2	24	28.9	+6	39.7
13	57	25.8	346	28.1		20.7	39	29.6		40.5
14	72	28.3	1	27.3		21.2	54	30.2		41.2
15	87	30.8	16	26.5		21.7	69	30.9		42.0
16	102	33.2	31	25.7		22.2	84	31.6		42.7
17	117	35.7	46	24.9	+23	22.7	99	32.3	+6	43.4
18	132	38.2	61	24.2	+23	23.2	114	33.0	+6	44.2
19	147	40.6	76	23.4		23.7	129	33.7		44.9
20	162	43.1	91	22.6		24.2	144	34.4		45.7
21	177	45.6	106	21.8		24.6	159	35.1		46.4
22	192	48.0	121	21.0		25.1	174	35.8		47.1
23	207	50.5	136	20.2		25.6	189	36.5		47.9
24	222	53.0	151	19.5	+23	26.1	204	37.2	+6	48.6
Dif	—		-8		+5		+7		+7	
							+21		-1	
									+22	
									+	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'9 PMG:11 ^h 56.7 ^m				Edad: 17.5 ^d PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'1 R°: 51 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	180	49.3	+16	11.7	323	32.5			-27	58.0	15	60 N	1 19	2 52	3 47		0 58	49	4 03	58
1	195	49.3		12.4	338	01.6	101		-27	59.5	13	58	1 53	3 08	3 58		0 21	50	4 40	56
2	210	49.4		13.1	352	30.6	100		-28	00.8	12	56	2 17	22	4 07		** ** *		5 06	56
3	225	49.4		13.8	6	59.6	100			02.0	11	54		36	33	16	** ** *		27	55
4	240	49.5		14.5	21	28.6	100			03.1	9	52	2 51	43	23		** ** *		45	54
5	255	49.5	+16	15.3	35	57.6	100		-28	04.0	8	50	3 04	3 52	4 30		23 53	40	5 59	55
6	270	49.6	+16	16.0	50	26.6	100		-28	04.8	7	45	3 30	4 11	4 44		23 23	43	6 30	54
7	285	49.6		16.7	64	55.6	100			05.5	5	40	3 49	26	4 55		23 00	44	6 53	54
8	300	49.7		17.4	79	24.5	99			06.0	4	35	4 05	38	5 05		22 41	45	7 12	54
9	315	49.7		18.1	93	53.5	100			06.4	3	30		18	4 48	14	22 24	47	29	53
10	330	49.8		18.8	108	22.5	100			06.6	2	20		38	5 05	29	21 56	49	7 57	52
11	345	49.9	+16	19.5	122	51.4	99		-28	06.8	1	10 N	4 54	5 19	5 41		21 32	50	8 21	52
12	0	49.9	+16	20.2	137	20.4	100		-28	06.7	1	0	5 07	5 32	5 53		21 10	51	8 43	52
13	15	50.0		21.0	151	49.4	100			06.6	3	10 S		18	43	6 05	20 48	52	9 06	51
14	30	50.0		21.7	166	18.3	99			06.3	4	20		28	5 54	17	20 24	53	30	50
15	45	50.1		22.4	180	47.3	100			05.9	6	30		38	6 06	31	19 56	55	9 58	49
16	60	50.1		23.1	195	16.2	99			05.3	7	35		43	13	40	39	56	10 14	49
17	75	50.2	+16	23.8	209	45.2	100		-28	04.6	8	40	5 48	6 20	6 49		19 20	57	10 34	48
18	90	50.2	+16	24.5	224	14.2	100		-28	03.8	10	45	5 53	6 28	6 59		18 57	58	10 57	47
19	105	50.3		25.2	238	43.2	100			02.8	11	50	5 59	38	7 12		27	60	11 27	45
20	120	50.3		25.9	253	12.2	100			01.7	12	52	6 02	42	18		18 12	61	42	44
21	135	50.4		26.6	267	41.2	100		-28	00.5	14	54		04	47	25	17 55	62	11 59	44
22	150	50.4		27.3	282	10.2	100		-27	59.1	15	56		07	52	33	34	64	12 20	42
23	165	50.5		28.0	296	39.2	100			57.6	17	58		10	6 57	41	17 08	67	12 46	39
24	180	50.5	+16	28.7	311	08.3	101		-27	55.9		60 S	6 13	7 04	7 50		16 32	72	13 22	34

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: -3.9 9 ^h 07.0 ^m		Mag: -3.9 PMG: 13 ^h 55 ^m		Mag: +1.3 PMG: 10 ^h 21 ^m		Mag: -2.0 PMG: 16 ^h 31 ^m		Mag: +0.9 PMG: 9 ^h 46 ^m	
	hG ♂		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	222	53.0	151	19.5	+23	26.1	204	37.2	+22	24.7
1	237	55.4	166	18.7		26.6	219	37.9		24.6
2	252	57.9	181	17.9		27.1	234	38.5		24.6
3	268	00.3	196	17.1		27.6	249	39.2		24.5
4	283	02.8	211	16.3		28.0	264	39.9		24.5
5	298	05.3	226	15.5	+23	28.5	279	40.6	+22	24.4
6	313	07.7	241	14.7	+23	29.0	294	41.3	+22	24.4
7	328	10.2	256	14.0		29.5	309	42.0		24.3
8	343	12.7	271	13.2		29.9	324	42.7		24.3
9	358	15.1	286	12.4		30.4	339	43.4		24.2
10	13	17.6	301	11.6		30.9	354	44.1		24.2
11	28	20.1	316	10.8	+23	31.4	9	44.8	+22	24.1
12	43	22.5	331	10.0	+23	31.8	24	45.5	+22	24.1
13	58	25.0	346	09.2		32.3	39	46.1		24.0
14	73	27.5	1	08.4		32.8	54	46.8		24.0
15	88	29.9	16	07.7		33.2	69	47.5	+6	23.9
16	103	32.4	31	06.9		33.7	84	48.2	+7	23.9
17	118	34.8	46	06.1	+23	34.2	99	48.9	+7	23.8
18	133	37.3	61	05.3	+23	34.6	114	49.6	+7	23.8
19	148	39.8	76	04.5		35.1	129	50.3		23.7
20	163	42.2	91	03.7		35.6	144	51.0		23.7
21	178	44.7	106	02.9		36.0	159	51.7		23.6
22	193	47.2	121	02.1		36.5	174	52.4		23.6
23	208	49.6	136	01.3		36.9	189	53.1		23.5
24	223	52.1	151	00.5	+23	37.4	204	53.7	+22	23.5
Dif	—		-8		+5		+7		+21	
									-1	
									+22	
									+1	

UT	SOL				LUNA							Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 56.6 ^m				Edad: 18.5 ^d SD: 14'7 PMG: 3 ^h 22 ^m PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'3 Rº: 52 ^m																
	hG ☉	Dec			hG ☾	Dif	Dec	Dif			Civil			Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	180	50.5	+16	28.7	311	08.3	100	-27	55.9	18	60 N	20 10	21 07	22 48	1 47 23	5 01 85					
1	195	50.6		29.4	325	37.3	101		54.1	19	58	19 59	20 50	22 09	1 11 31	5 36 77					
2	210	50.6		30.1	340	06.4	101		52.2	20	56	49	36	21 43	0 45 35	6 02 73					
3	225	50.6		30.8	354	35.5	101		50.2	20	54	41	24	23	25 38	22 70					
4	240	50.7		31.5	9	04.6	101		48.0	22	52	33	13	21 07	0 08 39	39 68					
5	255	50.7	+16	32.2	23	33.7	101	-27	45.7	23	50	19 26	20 04	20 53	** ** *	6 54 66					
6	270	50.8	+16	32.9	38	02.8	101	-27	43.2	25	45	19 12	19 45	20 26	** ** *	7 24 62					
7	285	50.8		33.6	52	32.0	102		40.6	26	40	19 00	29	20 06	23 44 39	7 47 60					
8	300	50.9		34.3	67	01.1	101		37.9	27	35	18 49	17	19 50	26 41	8 06 59					
9	315	50.9		35.0	81	30.3	102		35.1	28	30	41	19 06	37	23 11 43	22 57					
10	330	51.0		35.7	95	59.6	103		32.1	30	20	25	18 49	16	22 45 46	8 49 56					
11	345	51.0	+16	36.4	110	28.8	102	-27	28.9	32	10 N	18 12	18 34	19 00	22 22 49	9 13 53					
12	0	51.1	+16	37.1	124	58.1	103	-27	25.7	32	0	18 00	18 22	18 47	22 01 51	9 35 51					
13	15	51.1		37.8	139	27.4	103		22.3	34	10 S	17 48	18 10	35	21 40 53	9 57 50					
14	30	51.2		38.5	153	56.7	103		18.8	35	20	35	17 58	25	21 17 56	10 20 48					
15	45	51.2		39.2	168	26.0	103		15.2	36	30	21	46	14	20 51 58	10 47 46					
16	60	51.2		39.9	182	55.4	104		11.4	38	35	12	39	09	35 61	11 03 44					
17	75	51.3	+16	40.6	197	24.8	104	-27	07.5	39	40	17 03	17 32	18 04	20 17 63	11 22 42					
18	90	51.3	+16	41.3	211	54.3	105	-27	03.4	41	45	16 52	17 23	17 58	19 55 65	11 44 40					
19	105	51.4		42.0	226	23.7	104	-26	59.3	43	50	39	13	52	27 69	12 12 37					
20	120	51.4		42.7	240	53.2	105		55.0	43	52	33	09	49	19 13 72	26 35					
21	135	51.5		43.4	255	22.8	106		50.5	45	54	26	17 04	47	18 57 74	12 43 31					
22	150	51.5		44.1	269	52.3	105		46.0	45	56	18	16 59	44	38 78	13 02 28					
23	165	51.6		44.8	284	21.9	106		41.3	47	58	09	53	41	18 15 83	25 24					
24	180	51.6	+16	45.5	298	51.6	107	-26	36.5	48	60 S	16 00	16 47	17 37	17 44 91	13 56 16					
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG 9 ^h 03.0 ^m		Mag: -3.9 PMG: 13 ^h 57 ^m				Mag: +1.3 PMG: 10 ^h 20 ^m				Mag: -2.0 PMG: 16 ^h 28 ^m				Mag: +0.9 PMG: 9 ^h 42 ^m						
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	223	52.1	151	00.5	+23	37.4	204	53.7	+7	06.3	112	33.4	+22	23.5	214	05.7	+1	50.1			
1	238	54.6	165	59.7		37.9	219	54.4		07.0	127	35.5		23.4	229	07.9		50.2			
2	253	57.0	180	59.0		38.3	234	55.1		07.7	142	37.6		23.3	244	10.1		50.3			
3	268	59.5	195	58.2		38.8	249	55.8		08.5	157	39.6		23.3	259	12.4		50.4			
4	284	02.0	210	57.4		39.2	264	56.5		09.2	172	41.7		23.2	274	14.6		50.5			
5	299	04.4	225	56.6	+23	39.7	279	57.2	+7	09.9	187	43.7	+22	23.2	289	16.8	+1	50.6			
6	314	06.9	240	55.8	+23	40.1	294	57.9	+7	10.7	202	45.8	+22	23.1	304	19.0	+1	50.7			
7	329	09.3	255	55.0		40.6	309	58.6		11.4	217	47.9		23.1	319	21.2		50.8			
8	344	11.8	270	54.2		41.0	324	59.3		12.1	232	49.9		23.0	334	23.4		50.9			
9	359	14.3	285	53.4		41.5	340	00.0		12.9	247	52.0		23.0	349	25.6		51.0			
10	14	16.7	300	52.6		41.9	355	00.7		13.6	262	54.1		22.9	4	27.8		51.1			
11	29	19.2	315	51.8	+23	42.4	10	01.3	+7	14.3	277	56.1	+22	22.9	19	30.0	+1	51.2			
12	44	21.7	330	51.0	+23	42.8	25	02.0	+7	15.1	292	58.2	+22	22.8	34	32.3	+1	51.3			
13	59	24.1	345	50.2		43.2	40	02.7		15.8	308	00.3		22.8	49	34.5		51.4			
14	74	26.6	0	49.4		43.7	55	03.4		16.5	323	02.3		22.7	64	36.7		51.5			
15	89	29.1	15	48.6		44.1	70	04.1		17.3	338	04.4		22.7	79	38.9		51.6			
16	104	31.5	30	47.8		44.6	85	04.8		18.0	353	06.4		22.6	94	41.1		51.8			
17	119	34.0	45	47.0	+23	45.0	100	05.5	+7	18.7	8	08.5	+22	22.6	109	43.3	+1	51.9			
18	134	36.4	60	46.2	+23	45.4	115	06.2	+7	19.5	23	10.6	+22	22.5	124	45.5	+1	52.0			
19	149	38.9	75	45.5		45.9	130	06.9		20.2	38	12.6		22.5	139	47.7		52.1			
20	164	41.4	90	44.7		46.3	145	07.6		20.9	53	14.7		22.4	154	50.0		52.2			
21	179	43.8	105	43.9		46.7	160	08.2		21.7	68	16.7		22.3	169	52.2		52.3			
22	194	46.3	120	43.1		47.2	175	08.9		22.4	83	18.8		22.3	184	54.4		52.4			
23	209	48.8	135	42.3		47.6	190	09.6		23.1	98	20.9		22.2	199	56.6		52.5			
24	224	51.2	150	41.5	+23	48.0	205	10.3	+7	23.9	113	22.9	+22	22.2	214	58.8	+1	52.6			
Dif	—		-8		+4		+7		+7		+21		-1		+22		+1				

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 15'9 PMG:11 ^h 56.5 ^m			Edad: 19.5 ^d PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 PMG: 4 ^h 13 ^m R°: 49 ^m																		
	hG ☉	Dec		hG ☾	Dif		Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m				
0	180	51.6	+16	45.5	298	51.6	-26	36.5	49	60 N	1	05	2	45	3	42	2	08	9			
1	195	51.6		46.2	313	21.2		31.6	51	58	1	44	3	02	3	53	1	41	16			
2	210	51.7		46.9	327	50.9		26.5	52	56	2	10	17		4	03	19	21				
3	225	51.7		47.6	342	20.7		21.3	53	54	30		29	12	1	01	25	31	76			
4	240	51.8		48.2	356	50.4		16.0	55	52	2	46	39	19	0	46	28		46	73		
5	255	51.8	+16	48.9	11	20.3	-26	10.5	55	50	3	00	3	49	4	26	0	33	30	7	58	71
6	270	51.8	+16	49.6	25	50.1	-26	05.0	55	45	3	26	4	08	4	41	0	06	34	8	25	66
7	285	51.9		50.3	40	20.0	-25	59.3	57	40	3	47	23	4	53	**	**	**		8	46	63
8	300	51.9		51.0	54	49.9		53.5	58	35	4	03		36	5	03	**	**	**	9	03	60
9	315	52.0		51.7	69	19.9		47.5	60	30	16	4	47	12	23	52	37			18	58	
10	330	52.0		52.4	83	49.9		41.5	60	20	37	5	04	28	29	41	9	43	55			
11	345	52.0	+16	53.1	98	20.0	-25	35.3	62	10 N	4	53	5	19	5	41	23	09	45	10	05	51
12	0	52.1	+16	53.8	112	50.1	-25	29.0	63	0	5	06	5	31	5	53	22	51	47	10	25	49
13	15	52.1		54.4	127	20.2		22.5	65	10 S	18		43	6	05		32	51	10	45	46	
14	30	52.2		55.1	141	50.4		16.0	65	20	29	5	55	18	22	11	55		11	07	42	
15	45	52.2		55.8	156	20.6		09.3	67	30	39	6	08	33	21	48	58		31	39		
16	60	52.2		56.5	170	50.9	-25	02.5	68	35	44	15		41	34	61	11	46	37			
17	75	52.3	+16	57.2	185	21.2	-24	55.6	69	40	5	50	6	22	6	51	21	18	64	12	02	35
18	90	52.3	+16	57.9	199	51.5	-24	48.6	70	45	5	55	6	31	7	02	20	59	67	12	22	31
19	105	52.4		58.6	214	21.9		41.4	72	50	6	02	41	15	35	72		47	27			
20	120	52.4		59.2	228	52.4		34.2	72	52	04	45		22	23	75	12	59	24			
21	135	52.4	+16	59.9	243	22.9		26.8	74	54	07	50		29	20	10	78	13	13	21		
22	150	52.5	+17	00.6	257	53.4		19.3	75	56	10	6	55	36	19	55	81		29	17		
23	165	52.5		01.3	272	24.0		11.7	76	58	14	7	01	45	36	87	13	48	12			
24	180	52.5	+17	02.0	286	54.6	-24	04.0	77	60 S	6	17	7	08	7	55	19	14	93	14	11	6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 8 ^h 59.1 ^m		Mag: -3.9 PMG: 13 ^h 58 ^m		Mag: +1.3 PMG: 10 ^h 19 ^m		Mag: -2.0 PMG: 16 ^h 24 ^m		Mag: +0.9 PMG: 9 ^h 39 ^m									
	hG ♀	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	224	51.2	150	41.5	+23	48.0	205	10.3	+7	23.9	113	22.9	+22	22.2	214	58.8	+1	52.6
1	239	53.7	165	40.7		48.5	220	11.0		24.6	128	25.0		22.1	230	01.0		52.7
2	254	56.2	180	39.9		48.9	235	11.7		25.3	143	27.0		22.1	245	03.2		52.8
3	269	58.6	195	39.1		49.3	250	12.4		26.1	158	29.1		22.0	260	05.4		52.9
4	285	01.1	210	38.3		49.7	265	13.1		26.8	173	31.2		22.0	275	07.6		53.0
5	300	03.6	225	37.5	+23	50.2	280	13.8	+7	27.5	188	33.2	+22	21.9	290	09.9	+1	53.1
6	315	06.0	240	36.7	+23	50.6	295	14.5	+7	28.2	203	35.3	+22	21.9	305	12.1	+1	53.2
7	330	08.5	255	35.9		51.0	310	15.1		29.0	218	37.3		21.8	320	14.3		53.3
8	345	10.9	270	35.1		51.4	325	15.8		29.7	233	39.4		21.8	335	16.5		53.4
9	0	13.4	285	34.3		51.9	340	16.5		30.4	248	41.5		21.7	350	18.7		53.5
10	15	15.9	300	33.5		52.3	355	17.2		31.2	263	43.5		21.7	5	20.9		53.6
11	30	18.3	315	32.7	+23	52.7	10	17.9	+7	31.9	278	45.6	+22	21.6	20	23.1	+1	53.7
12	45	20.8	330	31.9	+23	53.1	25	18.6	+7	32.6	293	47.6	+22	21.5	35	25.3	+1	53.8
13	60	23.3	345	31.1		53.5	40	19.3		33.4	308	49.7		21.5	50	27.6		53.9
14	75	25.7	0	30.3		53.9	55	20.0		34.1	323	51.7		21.4	65	29.8		54.0
15	90	28.2	15	29.5		54.3	70	20.7		34.8	338	53.8		21.4	80	32.0		54.1
16	105	30.7	30	28.7		54.8	85	21.4		35.5	353	55.9		21.3	95	34.2		54.2
17	120	33.1	45	27.9	+23	55.2	100	22.0	+7	36.3	8	57.9	+22	21.3	110	36.4	+1	54.3
18	135	35.6	60	27.1	+23	55.6	115	22.7	+7	37.0	24	00.0	+22	21.2	125	38.6	+1	54.4
19	150	38.1	75	26.3		56.0	130	23.4		37.7	39	02.0		21.2	140	40.8		54.5
20	165	40.5	90	25.5		56.4	145	24.1		38.5	54	04.1		21.1	155	43.1		54.6
21	180	43.0	105	24.7		56.8	160	24.8		39.2	69	06.1		21.1	170	45.3		54.7
22	195	45.4	120	23.8		57.2	175	25.5		39.9	84	08.2		21.0	185	47.5		54.8
23	210	47.9	135	23.0		57.6	190	26.2		40.6	99	10.3		20.9	200	49.7		54.9
24	225	50.4	150	22.2	+23	58.0	205	26.9	+7	41.4	114	12.3	+22	20.9	215	51.9	+1	55.0
Dif	—		-8		+4		+7		+7		+21		-1		+22		+1	

UT	SOL				LUNA							Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna										
	SD: 15'8 PMG:11 ^h 56.5 ^m				Edad: 20.5 ^d SD: 14'9 PMG: 5 ^h 02 ^m PHE { 4 ^h : 54'7 12 ^h : 54'9 20 ^h : 55'1 Rº: 49 ^m																							
	hG ☉	Dec			hG ☾	Dif			Dec	Dif	Civil			Náutico	Hora	Rº	Hora	Rº										
h	º	'	º	'	º	'	º	'	º	'	º	h m	h m	h m	h m m	h m m	h m m											
0	180	52.5	+17	02.0	286	54.6		-24	04.0	79	60 N	20 15	21 13	23 05	2 17 5	7 58 95												
1	195	52.6		02.6	301	25.2	116	-23	56.1	79	58	20 03	20 55	22 18	1 57 11	8 17 89												
2	210	52.6		03.3	315	56.0	117		48.2	81	56	19 53	41	21 50	40 16	33 85												
3	225	52.6		04.0	330	26.7	118		40.1	82	54	44	28	28	26 19	47 81												
4	240	52.7		04.7	344	57.5	118		31.9	83	52	36	17	21 11	14 22	8 59 77												
5	255	52.7	+17	05.4	359	28.4	119	-23	23.6	84	50	19 29	20 07	20 57	1 03 24	9 09 75												
6	270	52.8	+17	06.0	13	59.3	119	-23	15.2	85	45	19 14	19 47	20 29	0 40 29	9 31 70												
7	285	52.8		06.7	28	30.2	119	-23	06.7	86	40	19 02	32	20 09	21 33	9 49 66												
8	300	52.8		07.4	43	01.2	120	-22	58.1	88	35	18 51	19	19 52	0 06 36	10 03 63												
9	315	52.9		08.1	57	32.2	120		49.3	88	30	42	19 08	39	** ** *	16 60												
10	330	52.9		08.7	72	03.3	121		40.5	88	20	26	18 50	17	** ** *	38 55												
11	345	52.9	+17	09.4	86	34.4	121	-22	31.5	90	10 N	18 13	18 35	19 00	23 54 43	10 56 52												
12	0	53.0	+17	10.1	101	05.6	122	-22	22.5	90	0	18 00	18 22	18 47	23 38 48	11 14 48												
13	15	53.0		10.8	115	36.8	122		13.3	92	10 S	17 47	18 09	35	23 51	31 45												
14	30	53.0		11.4	130	08.1	123	-22	04.0	93	20	34	17 57	24	23 06 55	11 49 41												
15	45	53.1		12.1	144	39.4	123	-21	54.7	93	30	19	44	13	22 46 61	12 10 37												
16	60	53.1		12.8	159	10.7	123		45.2	95	35	11	37	08	35 63	23 33												
17	75	53.1	+17	13.5	173	42.1	124	-21	35.6	96	40	17 01	17 30	18 02	22 22 66	12 37 30												
18	90	53.2	+17	14.1	188	13.6	125	-21	25.9	97	45	16 49	17 21	17 56	22 06 71	12 53 27												
19	105	53.2		14.8	202	45.0	124		16.1	98	50	36	10	49	21 47 76	13 14 21												
20	120	53.2		15.5	217	16.6	126	-21	06.2	99	52	29	06	47	38 79	23 19												
21	135	53.2		16.2	231	48.1	125	-20	56.2	100	54	22	17 01	43	28 81	34 16												
22	150	53.3		16.8	246	19.8	127		46.1	101	56	14	16 55	40	16 85	13 46 13												
23	165	53.3		17.5	260	51.4	126		35.9	102	58	16 05	49	37	21 03 89	14 00 9												
24	180	53.3	+17	18.2	275	23.1	127	-20	25.6	103	60 S	15 55	16 42	17 33	20 47 95	14 17 4												
UT	ARIES PMG 8 ^h 55.2 ^m				VENUS Mag: -3.9 PMG: 13 ^h 59 ^m				MARTE Mag: +1.2 PMG: 10 ^h 18 ^m				JÚPITER Mag: -2.0 PMG: 16 ^h 21 ^m				SATURNO Mag: +0.9 PMG: 9 ^h 35 ^m											
	hG ♈	Dec			hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec										
h	º	'	º	'	º	'	º	'	º	'	º	'	º	'	º	'	º	'	º	'								
0	225	50.4	150	22.2	+23	58.0	205	26.9	+7	41.4	114	12.3	+22	20.9	215	51.9	+1	55.0										
1	240	52.8	165	21.4		58.4	220	27.6		42.1	129	14.4		20.8	230	54.1		55.1										
2	255	55.3	180	20.6		58.8	235	28.3		42.8	144	16.4		20.8	245	56.3		55.2										
3	270	57.8	195	19.8		59.2	250	28.9		43.5	159	18.5		20.7	260	58.6		55.3										
4	286	00.2	210	19.0	+23	59.6	265	29.6		44.3	174	20.5		20.7	276	00.8		55.4										
5	301	02.7	225	18.2	+24	00.0	280	30.3	+7	45.0	189	22.6	+22	20.6	291	03.0	+1	55.5										
6	316	05.2	240	17.4	+24	00.4	295	31.0	+7	45.7	204	24.6	+22	20.6	306	05.2	+1	55.6										
7	331	07.6	255	16.6		00.8	310	31.7		46.5	219	26.7		20.5	321	07.4		55.7										
8	346	10.1	270	15.8		01.2	325	32.4		47.2	234	28.7		20.5	336	09.6		55.8										
9	1	12.6	285	15.0		01.6	340	33.1		47.9	249	30.8		20.4	351	11.8		55.9										
10	16	15.0	300	14.2		02.0	355	33.8		48.6	264	32.9		20.3	6	14.1		56.0										
11	31	17.5	315	13.4	+24	02.3	10	34.5	+7	49.4	279	34.9	+22	20.3	21	16.3	+1	56.1										
12	46	19.9	330	12.6	+24	02.7	25	35.1	+7	50.1	294	37.0	+22	20.2	36	18.5	+1	56.2										
13	61	22.4	345	11.8		03.1	40	35.8		50.8	309	39.0		20.2	51	20.7		56.3										
14	76	24.9	0	11.0		03.5	55	36.5		51.5	324	41.1		20.1	66	22.9		56.4										
15	91	27.3	15	10.2		03.9	70	37.2		52.3	339	43.1		20.1	81	25.1		56.5										
16	106	29.8	30	09.3		04.3	85	37.9		53.0	354	45.2		20.0	96	27.3		56.6										
17	121	32.3	45	08.5	+24	04.7	100	38.6	+7	53.7	9	47.2	+22	20.0	111	29.6	+1	56.7										
18	136	34.7	60	07.7	+24	05.0	115	39.3	+7	54.4	24	49.3	+22	19.9	126	31.8	+1	56.8										
19	151	37.2	75	06.9		05.4	130	40.0		55.2	39	51.3		19.9	141	34.0		56.9										
20	166	39.7	90	06.1		05.8	145	40.7		55.9	54	53.4		19.8	156	36.2		57.0										
21	181	42.1	105	05.3		06.2	160	41.3		56.6	69	55.4		19.7	171	38.4		57.1										
22	196	44.6	120	04.5		06.5	175	42.0		57.3	84	57.5		19.7	186	40.6		57.2										
23	211	47.1	135	03.7		06.9	190	42.7		58.1	99	59.5		19.6	201	42.8		57.3										
24	226	49.5	150	02.9	+24	07.3	205	43.4	+7	58.8	115	01.6	+22	19.6	216	45.1	+1	57.4										
Dif	—				-8				+4				+21				-1				+22				+			

UT	SOL			☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 56.4 ^m			Edad: 21.5 ^d PHE { 4 ^h : 55 ^h 3 12 ^h : 55 ^h 5 20 ^h : 55 ^h 7 Rº: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	180	53.3	+17	18.2	275	23.1	128	-20	25.6	104	60 N	0 47	2 39	3 37	2 21	1	9 32	92
1	195	53.4		18.8	289	54.9	105		15.2		58	1 34	2 57	49	2 06	6	45	88
2	210	53.4		19.5	304	26.7	106	-20	04.7		56	2 03	3 12	3 59	1 54	10	9 56	84
3	225	53.4		20.2	318	58.5	107	-19	54.1		54	24	24	4 08	44	13	10 06	81
4	240	53.5		20.8	333	30.4	107		43.4		52	41	35	16	34	16	15	77
5	255	53.5	+17	21.5	348	02.3	107	-19	32.7		50	2 55	3 45	4 23	1 26	18	10 23	75
6	270	53.5	+17	22.2	2	34.2	109	-19	21.8		45	3 23	4 05	4 38	1 08	23	10 40	69
7	285	53.5		22.8	17	06.2	110	-19	10.8		40	3 44	21	4 51	0 53	27	10 53	66
8	300	53.6		23.5	31	38.2	111	-18	59.7		35	4 00	34	5 01	40	31	11 05	61
9	315	53.6		24.2	46	10.3	111		48.6		30	14	4 45	11	29	34	15	58
10	330	53.6		24.8	60	42.4	113		37.3		20	36	5 03	27	0 10	38	32	54
11	345	53.7	+17	25.5	75	14.6	113	-18	26.0		10 N	4 52	5 18	5 40	** ** *		11 47	49
12	0	53.7	+17	26.2	89	46.8	115	-18	14.5		0	5 06	5 31	5 53	** ** *		12 00	46
13	15	53.7		26.8	104	19.0	115	-18	03.0		10 S	18	44	6 06	** ** *		14	41
14	30	53.7		27.5	118	51.2	116	-17	51.4		20	29	5 56	19	** ** *		29	36
15	45	53.8		28.1	133	23.5	117		39.7		30	40	6 09	34	23 45	59	45	32
16	60	53.8		28.8	147	55.9	118		27.9		35	46	16	43	37	62	12 55	29
17	75	53.8	+17	29.5	162	28.2	119	-17	16.0		40	5 51	6 24	6 53	23 27	66	13 06	25
18	90	53.8	+17	30.1	177	00.6	120	-17	04.0		45	5 58	6 33	7 04	23 16	70	13 18	22
19	105	53.9		30.8	191	33.1	120	-16	52.0		50	6 04	43	18	23 02	75	34	16
20	120	53.9		31.4	206	05.5	122		39.8		52	07	48	25	22 55	78	41	14
21	135	53.9		32.1	220	38.0	122		27.6		54	10	53	32	48	81	49	11
22	150	53.9		32.8	235	10.5	123		15.3		56	13	6 59	40	40	84	13 58	8
23	165	54.0		33.4	249	43.1	124	-16	02.9		58	17	7 05	7 49	31	87	14 08	5
24	180	54.0	+17	34.1	264	15.7	125	-15	50.4		60 S	6 21	7 12	8 00	22 20	92	14 19	1
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: -3.9 8 ^h 51.2 ^m		Mag: -3.9 PMG: 14 ^h 01 ^m		Mag: +1.2 PMG: 10 ^h 17 ^m		Mag: -2.0 PMG: 16 ^h 18 ^m		Mag: +0.9 PMG: 9 ^h 32 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	226	49.5	150	02.9	+24	07.3	205	43.4	+7	58.8	115	01.6	+22	19.6	216	45.1	+1	57.4
1	241	52.0	165	02.1		07.7	220	44.1	+7	59.5	130	03.6		19.5	231	47.3		57.4
2	256	54.4	180	01.3		08.0	235	44.8	+8	00.2	145	05.7		19.5	246	49.5		57.5
3	271	56.9	195	00.4		08.4	250	45.5		00.9	160	07.7		19.4	261	51.7		57.6
4	286	59.4	209	59.6		08.8	265	46.2		01.7	175	09.8		19.4	276	53.9		57.7
5	302	01.8	224	58.8	+24	09.1	280	46.8	+8	02.4	190	11.8	+22	19.3	291	56.1	+1	57.8
6	317	04.3	239	58.0	+24	09.5	295	47.5	+8	03.1	205	13.9	+22	19.2	306	58.4	+1	57.9
7	332	06.8	254	57.2		09.9	310	48.2		03.8	220	15.9		19.2	322	00.6		58.0
8	347	09.2	269	56.4		10.2	325	48.9		04.6	235	18.0		19.1	337	02.8		58.1
9	2	11.7	284	55.6		10.6	340	49.6		05.3	250	20.0		19.1	352	05.0		58.2
10	17	14.2	299	54.8		11.0	355	50.3		06.0	265	22.1		19.0	7	07.2		58.3
11	32	16.6	314	54.0	+24	11.3	10	51.0	+8	06.7	280	24.1	+22	19.0	22	09.4	+1	58.4
12	47	19.1	329	53.1	+24	11.7	25	51.7	+8	07.5	295	26.2	+22	18.9	37	11.7	+1	58.5
13	62	21.5	344	52.3		12.0	40	52.4		08.2	310	28.2		18.9	52	13.9		58.6
14	77	24.0	359	51.5		12.4	55	53.0		08.9	325	30.3		18.8	67	16.1		58.7
15	92	26.5	14	50.7		12.8	70	53.7		09.6	340	32.3		18.7	82	18.3		58.8
16	107	28.9	29	49.9		13.1	85	54.4		10.3	355	34.4		18.7	97	20.5		58.9
17	122	31.4	44	49.1	+24	13.5	100	55.1	+8	11.1	10	36.4	+22	18.6	112	22.7	+1	59.0
18	137	33.9	59	48.3	+24	13.8	115	55.8	+8	11.8	25	38.5	+22	18.6	127	25.0	+1	59.1
19	152	36.3	74	47.5		14.2	130	56.5		12.5	40	40.5		18.5	142	27.2		59.2
20	167	38.8	89	46.6		14.5	145	57.2		13.2	55	42.6		18.5	157	29.4		59.3
21	182	41.3	104	45.8		14.9	160	57.9		13.9	70	44.6		18.4	172	31.6		59.4
22	197	43.7	119	45.0		15.2	175	58.5		14.7	85	46.7		18.3	187	33.8		59.5
23	212	46.2	134	44.2		15.6	190	59.2		15.4	100	48.7		18.3	202	36.0		59.6
24	227	48.7	149	43.4	+24	15.9	205	59.9	+8	16.1	115	50.7	+22	18.2	217	38.3	+1	59.7
Dif	—		-8		+4		+7		+7		+20		-1		+22		+	

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 56.4 ^m				Edad: 22.5 ^d SD: 15'2 PMG: 6 ^h 35 ^m PHE { 4 ^h : 56'0 12 ^h : 56'2 20 ^h : 56'5 R°: 46 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m	
0	180	54.0	+17	34.1	264	15.7	-15	50.4	60 N	20 20	21 20	23 31	2 22	1	11 04	93
1	195	54.0		34.7	278	48.3		37.9	58	20 08	21 01	22 28	12	6	13 89	
2	210	54.0		35.4	293	21.0		25.2	56	19 57	20 45	21 57	2 04	9	20 86	
3	225	54.1		36.0	307	53.6	-15	12.5	54		48	32	1 57	11	27 82	
4	240	54.1		36.7	322	26.3	-14	59.7	52		40	21	16	50	32 80	
5	255	54.1	+17	37.4	336	59.0	-14	46.8	50	19 32	20 11	21 01	1 44	17	11 38	77
6	270	54.1	+17	38.0	351	31.8	-14	33.9	45	19 16	19 50	20 32	1 31	22	11 49	72
7	285	54.2		38.7	6	04.6		20.8	40	19 04	34	20 11	20	26	11 59	67
8	300	54.2		39.3	20	37.4	-14	07.7	35	18 53	20	19 54	11	29	12 06	64
9	315	54.2		40.0	35	10.2	-13	54.5	30	43	19 09	40	1 03	32	13 61	
10	330	54.2		40.6	49	43.0		41.3	20	27	18 50	18	0 48	38	26 55	
11	345	54.2	+17	41.3	64	15.9	-13	27.9	10 N	18 13	18 35	19 01	0 36	42	12 36	50
12	0	54.3	+17	41.9	78	48.8	-13	14.5	0	18 00	18 22	18 47	0 24	46	12 46	46
13	15	54.3		42.6	93	21.7	-13	01.0	10 S	17 47	18 09	34	12	51	12 55	42
14	30	54.3		43.2	107	54.6	-12	47.5	20	33	17 56	23	0 00	55	13 05	37
15	45	54.3		43.9	122	27.5		33.9	30	18	43	12	**	**	17 31	
16	60	54.3		44.5	137	00.5		20.2	35	17 09	36	06	**	**	24 28	
17	75	54.4	+17	45.2	151	33.4	-12	06.4	40	16 59	17 28	18 00	**	**	13 31	25
18	90	54.4	+17	45.8	166	06.4	-11	52.6	45	16 47	17 18	17 54	**	**	13 40	21
19	105	54.4		46.5	180	39.4		38.7	50	33	08	47	**	**	50 16	
20	120	54.4		47.1	195	12.4		24.7	52	26	17 03	44	**	**	13 55	13
21	135	54.4		47.8	209	45.4	-11	10.6	54	18	16 58	40	**	**	14 00	11
22	150	54.5		48.4	224	18.4	-10	56.5	56	10	52	37	**	**	06 8	
23	165	54.5		49.0	238	51.5		42.4	58	16 01	45	33	23	58	13 5	
24	180	54.5	+17	49.7	253	24.5	-10	28.1	60 S	15 50	16 38	17 29	23	52	14 20	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 47.3 ^m		Mag: -3.9 PMG: 14 ^h 02 ^m		Mag: +1.2 PMG: 10 ^h 16 ^m		Mag: -2.0 PMG: 16 ^h 14 ^m		Mag: +0.9 PMG: 9 ^h 28 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /								
0	227	48.7	149	43.4	+24	15.9	205	59.9	+8	16.1	115	50.7	+22	18.2	217	38.3	+1	59.7
1	242	51.1	164	42.6		16.3	221	00.6		16.8	130	52.8		18.2	232	40.5		59.8
2	257	53.6	179	41.8		16.6	236	01.3		17.5	145	54.8		18.1	247	42.7	+1	59.9
3	272	56.0	194	40.9		16.9	251	02.0		18.3	160	56.9		18.1	262	44.9	+2	00.0
4	287	58.5	209	40.1		17.3	266	02.7		19.0	175	58.9		18.0	277	47.1	+2	00.1
5	303	01.0	224	39.3	+24	17.6	281	03.4	+8	19.7	191	01.0	+22	17.9	292	49.3	+2	00.2
6	318	03.4	239	38.5	+24	18.0	296	04.0	+8	20.4	206	03.0	+22	17.9	307	51.6	+2	00.3
7	333	05.9	254	37.7		18.3	311	04.7		21.1	221	05.1		17.8	322	53.8		00.4
8	348	08.4	269	36.9		18.6	326	05.4		21.9	236	07.1		17.8	337	56.0		00.5
9	3	10.8	284	36.0		19.0	341	06.1		22.6	251	09.2		17.7	352	58.2		00.6
10	18	13.3	299	35.2		19.3	356	06.8		23.3	266	11.2		17.7	8	00.4		00.7
11	33	15.8	314	34.4	+24	19.6	11	07.5	+8	24.0	281	13.2	+22	17.6	23	02.6	+2	00.8
12	48	18.2	329	33.6	+24	20.0	26	08.2	+8	24.7	296	15.3	+22	17.6	38	04.9	+2	00.9
13	63	20.7	344	32.8		20.3	41	08.9		25.4	311	17.3		17.5	53	07.1		01.0
14	78	23.2	359	32.0		20.6	56	09.5		26.2	326	19.4		17.4	68	09.3		01.1
15	93	25.6	14	31.1		21.0	71	10.2		26.9	341	21.4		17.4	83	11.5		01.2
16	108	28.1	29	30.3		21.3	86	10.9		27.6	356	23.5		17.3	98	13.7		01.3
17	123	30.5	44	29.5	+24	21.6	101	11.6	+8	28.3	11	25.5	+22	17.3	113	16.0	+2	01.4
18	138	33.0	59	28.7	+24	21.9	116	12.3	+8	29.0	26	27.5	+22	17.2	128	18.2	+2	01.5
19	153	35.5	74	27.9		22.2	131	13.0		29.7	41	29.6		17.2	143	20.4		01.6
20	168	37.9	89	27.0		22.6	146	13.7		30.5	56	31.6		17.1	158	22.6		01.7
21	183	40.4	104	26.2		22.9	161	14.3		31.2	71	33.7		17.0	173	24.8		01.8
22	198	42.9	119	25.4		23.2	176	15.0		31.9	86	35.7		17.0	188	27.1		01.9
23	213	45.3	134	24.6		23.5	191	15.7		32.6	101	37.8		16.9	203	29.3		02.0
24	228	47.8	149	23.8	+24	23.8	206	16.4	+8	33.3	116	39.8	+22	16.9	218	31.5	+2	02.1
Dif	—		-8		+3		+7		+7		+20		-1		+22		+1	

UT	SOL			☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 56.4 ^m			Edad: 23.5 ^d SD: 15/4 PMG: 7 ^h 20 ^m PHE { 4 ^h : 56/8 12 ^h : 57/1 20 ^h : 57/4 R°: 44 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	180	54.5	+17	49.7	253	24.5	-10	28.1	60 N	0 22	2 32	3 32	2 22	0	12 36 93	
1	195	54.5		50.3	267	57.6	-10	13.8	58	1 24	2 51	44	16	4	40 89	
2	210	54.5		51.0	282	30.6	-9	59.5	56	1 55	3 07	3 55	11	7	44 86	
3	225	54.6		51.6	297	03.7		45.1	54	2 18	20	4 04	07	9	48 82	
4	240	54.6		52.3	311	36.8		30.6	52	36	31	13	2 03	12	51 80	
5	255	54.6	+17	52.9	326	09.8	-9	16.0	50	2 51	3 42	4 20	1 59	14	12 53 78	
6	270	54.6	+17	53.6	340	42.9	-9	01.4	45	3 20	4 02	4 36	1 51	19	13 00 72	
7	285	54.6		54.2	355	16.0	-8	46.8	40	41	19	4 49	44	23	05 67	
8	300	54.6		54.8	9	49.0		32.1	35	3 58	32	5 00	39	26	09 64	
9	315	54.7		55.5	24	22.1		17.3	30	4 12	4 43	09	33	30	13 60	
10	330	54.7		56.1	38	55.2	-8	02.5	20	34	5 02	26	24	35	19 55	
11	345	54.7	+17	56.8	53	28.2	-7	47.6	10 N	4 52	5 18	5 40	1 16	40	13 25 49	
12	0	54.7	+17	57.4	68	01.3	-7	32.6	0	5 06	5 31	5 53	1 09	44	13 30 45	
13	15	54.7		58.0	82	34.3		17.6	10 S	18	44	6 06	1 01	50	35 40	
14	30	54.7		58.7	97	07.4	-7	02.6	20	30	5 57	20	0 53	54	41 35	
15	45	54.7		59.3	111	40.4	-6	47.5	30	41	6 10	35	44	60	47 30	
16	60	54.8	+17	59.9	126	13.4		32.4	35	47	17	44	39	63	51 26	
17	75	54.8	+18	00.6	140	46.4	-6	17.2	40	5 53	6 26	6 55	0 33	67	13 55 22	
18	90	54.8	+18	01.2	155	19.4	-6	01.9	45	6 00	6 35	7 07	0 26	71	13 59 19	
19	105	54.8		01.8	169	52.4	-5	46.6	50	07	46	21	17	77	14 05 13	
20	120	54.8		02.5	184	25.4		31.3	52	10	51	28	13	79	07 11	
21	135	54.8		03.1	198	58.3		15.9	54	13	6 56	35	09	82	10 9	
22	150	54.8		03.7	213	31.3	-5	00.5	56	17	7 02	44	0 04	85	13 6	
23	165	54.8		04.4	228	04.2	-4	45.0	58	20	09	7 53	** ** *	**	16 3	
24	180	54.9	+18	05.0	242	37.1	-4	29.5	60 S	6 24	7 16	8 04	** ** *	**	14 20 **	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 8 ^h 43.4 ^m		Mag: -3.9 PMG: 14 ^h 03 ^m			Mag: +1.2 PMG: 10 ^h 14 ^m			Mag: -2.0 PMG: 16 ^h 11 ^m			Mag: +0.9 PMG: 9 ^h 25 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	228	47.8	149	23.8	+24	23.8	206	16.4	+8	33.3	116	39.8	+22	16.9	218	31.5
1	243	50.3	164	23.0		24.2	221	17.1		34.0	131	41.8		16.8	233	33.7
2	258	52.7	179	22.1		24.5	236	17.8		34.8	146	43.9		16.7	248	35.9
3	273	55.2	194	21.3		24.8	251	18.5		35.5	161	45.9		16.7	263	38.1
4	288	57.6	209	20.5		25.1	266	19.2		36.2	176	48.0		16.6	278	40.4
5	304	00.1	224	19.7	+24	25.4	281	19.8	+8	36.9	191	50.0	+22	16.6	293	42.6
6	319	02.6	239	18.9	+24	25.7	296	20.5	+8	37.6	206	52.0	+22	16.5	308	44.8
7	334	05.0	254	18.0		26.0	311	21.2		38.3	221	54.1		16.5	323	47.0
8	349	07.5	269	17.2		26.3	326	21.9		39.0	236	56.1		16.4	338	49.2
9	4	10.0	284	16.4		26.6	341	22.6		39.8	251	58.2		16.3	353	51.5
10	19	12.4	299	15.6		26.9	356	23.3		40.5	267	00.2		16.3	8	53.7
11	34	14.9	314	14.8	+24	27.3	11	24.0	+8	41.2	282	02.2	+22	16.2	23	55.9
12	49	17.4	329	13.9	+24	27.6	26	24.6	+8	41.9	297	04.3	+22	16.2	38	58.1
13	64	19.8	344	13.1		27.9	41	25.3		42.6	312	06.3		16.1	54	00.3
14	79	22.3	359	12.3		28.2	56	26.0		43.3	327	08.4		16.1	69	02.6
15	94	24.8	14	11.5		28.5	71	26.7		44.0	342	10.4		16.0	84	04.8
16	109	27.2	29	10.6		28.7	86	27.4		44.8	357	12.4		15.9	99	07.0
17	124	29.7	44	09.8	+24	29.0	101	28.1	+8	45.5	12	14.5	+22	15.9	114	09.2
18	139	32.1	59	09.0	+24	29.3	116	28.8	+8	46.2	27	16.5	+22	15.8	129	11.4
19	154	34.6	74	08.2		29.6	131	29.4		46.9	42	18.6		15.8	144	13.7
20	169	37.1	89	07.4		29.9	146	30.1		47.6	57	20.6		15.7	159	15.9
21	184	39.5	104	06.5		30.2	161	30.8		48.3	72	22.6		15.6	174	18.1
22	199	42.0	119	05.7		30.5	176	31.5		49.0	87	24.7		15.6	189	20.3
23	214	44.5	134	04.9		30.8	191	32.2		49.7	102	26.7		15.5	204	22.5
24	229	46.9	149	04.1	+24	31.1	206	32.9	+8	50.5	117	28.7	+22	15.5	219	24.8
Dif	—		-8		+3		+7		+7		+20		-1		+22	
															+1	

UT	SOL		LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 56.3 ^m		Edad: 24.5 ^d SD: 15'7 PMG: 8 ^h 04 ^m PHE { 4 ^h : 57'7 12 ^h : 58'0 20 ^h : 58'3 Rº: 48 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	Rº	Hora	Rº
h	° /	° /	° /		° /		°	h m	h m	h m	h m	h m	m	h m	m	
0	180 54.9	+18 05.0	242 37.1		-4 29.5		60 N	20 25	21 26	** **		2 22	1	14 09	98	
1	195 54.9	05.6	257 10.0	139	-4 13.9	156	58	12	21 06	22 39		20	4	09	94	
2	210 54.9	06.3	271 42.8	138	-3 58.3	156	56	20 01	20 50	22 04		18	7	10	90	
3	225 54.9	06.9	286 15.6	138		42.7	54	19 51	36	21 40		16	10	10	87	
4	240 54.9	07.5	300 48.4	138		27.0	52	43	24	21		15	12	11	84	
5	255 54.9	+18 08.2	315 21.2	138	-3 11.3	157	50	19 35	20 14	21 06		2 13	15	14 11	82	
6	270 54.9	+18 08.8	329 54.0	138	-2 55.6	157	45	19 19	19 53	20 36		2 10	20	14 12	76	
7	285 54.9	09.4	344 26.7	137		39.8	40	19 05	36	20 13		07	25	12	72	
8	300 54.9	10.1	358 59.4	137		24.0	35	18 54	22	19 56		05	28	13	67	
9	315 55.0	10.7	13 32.1	137	-2 08.1	159	30	44	19 10	42		2 03	31	13	64	
10	330 55.0	11.3	28 04.7	136	-1 52.2	159	20	28	18 51	19		1 59	38	14	58	
11	345 55.0	+18 11.9	42 37.3	136	-1 36.3	159	10 N	18 13	18 35	19 02		1 56	43	14 14	53	
12	0 55.0	+18 12.6	57 09.8	135	-1 20.4	159	0	18 00	18 22	18 47		1 53	47	14 15	48	
13	15 55.0	13.2	71 42.4	136	-1 04.4	160	10 S	17 47	18 09	34		51	51	15	43	
14	30 55.0	13.8	86 14.9	135	-0 48.4	160	20	32	17 56	22		47	57	16	38	
15	45 55.0	14.4	100 47.3	134		32.4	30	17	42	11		44	63	17	32	
16	60 55.0	15.1	115 19.7	134		16.3	35	17 07	34	18 05		42	66	17	29	
17	75 55.0	+18 15.7	129 52.1	134	-0 00.2	161	40	16 57	17 26	17 58		1 40	70	14 17	25	
18	90 55.0	+18 16.3	144 24.4	133	+0 15.9	161	45	16 45	17 16	17 52		1 37	75	14 18	20	
19	105 55.0	16.9	158 56.7	133		32.0	50	30	05	44		34	80	18	16	
20	120 55.0	17.5	173 28.9	132	+0 48.1	161	52	23	17 00	41		32	83	18	13	
21	135 55.0	18.2	188 01.1	132	+1 04.3	162	54	15	16 54	38		31	85	19	10	
22	150 55.1	18.8	202 33.2	131		20.5	56	16 06	48	34		29	88	19	8	
23	165 55.1	19.4	217 05.3	131		36.7	58	15 57	42	30		27	92	19	5	
24	180 55.1	+18 20.0	231 37.3	130	+1 52.9	162	60 S	15 45	16 34	17 26		1 24	96	14 19	1	
UT	ARIES PMG 8 ^h 39.4 ^m		VENUS Mag: -3.9 PMG: 14 ^h 05 ^m		MARTE Mag: +1.2 PMG: 10 ^h 13 ^m		JÚPITER Mag: -2.0 PMG: 16 ^h 08 ^m		SATURNO Mag: +0.9 PMG: 9 ^h 21 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	° /	° /	° /		° /		° /		° /							
0	229 46.9	149 04.1	+24 31.1		206 32.9	+8 50.5	117 28.7	+22 15.5	219 24.8	+2 04.4						
1	244 49.4	164 03.2	31.4		221 33.6	51.2	132 30.8	15.4	234 27.0	04.5						
2	259 51.9	179 02.4	31.7		236 34.2	51.9	147 32.8	15.4	249 29.2	04.6						
3	274 54.3	194 01.6	31.9		251 34.9	52.6	162 34.8	15.3	264 31.4	04.7						
4	289 56.8	209 00.8	32.2		266 35.6	53.3	177 36.9	15.2	279 33.7	04.8						
5	304 59.2	223 59.9	+24 32.5		281 36.3	+8 54.0	192 38.9	+22 15.2	294 35.9	+2 04.9						
6	320 01.7	238 59.1	+24 32.8		296 37.0	+8 54.7	207 41.0	+22 15.1	309 38.1	+2 04.9						
7	335 04.2	253 58.3	33.1		311 37.7	55.4	222 43.0	15.1	324 40.3	05.0						
8	350 06.6	268 57.5	33.3		326 38.4	56.1	237 45.0	15.0	339 42.5	05.1						
9	5 09.1	283 56.6	33.6		341 39.0	56.9	252 47.1	14.9	354 44.8	05.2						
10	20 11.6	298 55.8	33.9		356 39.7	57.6	267 49.1	14.9	9 47.0	05.3						
11	35 14.0	313 55.0	+24 34.2		11 40.4	+8 58.3	282 51.1	+22 14.8	24 49.2	+2 05.4						
12	50 16.5	328 54.2	+24 34.4		26 41.1	+8 59.0	297 53.2	+22 14.8	39 51.4	+2 05.5						
13	65 19.0	343 53.4	34.7		41 41.8	+8 59.7	312 55.2	14.7	54 53.6	05.6						
14	80 21.4	358 52.5	35.0		56 42.5	+9 00.4	327 57.2	14.6	69 55.9	05.7						
15	95 23.9	13 51.7	35.3		71 43.2	01.1	342 59.3	14.6	84 58.1	05.8						
16	110 26.4	28 50.9	35.5		86 43.8	01.8	358 01.3	14.5	100 00.3	05.9						
17	125 28.8	43 50.0	+24 35.8		101 44.5	+9 02.5	13 03.3	+22 14.5	115 02.5	+2 06.0						
18	140 31.3	58 49.2	+24 36.1		116 45.2	+9 03.2	28 05.4	+22 14.4	130 04.8	+2 06.1						
19	155 33.7	73 48.4	36.3		131 45.9	03.9	43 07.4	14.3	145 07.0	06.2						
20	170 36.2	88 47.6	36.6		146 46.6	04.7	58 09.4	14.3	160 09.2	06.3						
21	185 38.7	103 46.7	36.9		161 47.3	05.4	73 11.5	14.2	175 11.4	06.4						
22	200 41.1	118 45.9	37.1		176 47.9	06.1	88 13.5	14.2	190 13.6	06.5						
23	215 43.6	133 45.1	37.4		191 48.6	06.8	103 15.5	14.1	205 15.9	06.6						
24	230 46.1	148 44.3	+24 37.6		206 49.3	+9 07.5	118 17.6	+22 14.0	220 18.1	+2 06.7						
Dif	—	-8	+3		+7	+7	+20	-1	+22	+1						

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15/8 PMG:11 ^h 56.3 ^m				Edad: 25.5 ^d SD: 15/9 PMG: 8 ^h 50 ^m														
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	180	55.1	+18	20.0	231	37.3	+1	52.9	60 N	**	**	2	26	3	27	2	22	0	15
1	195	55.1		20.6	246	09.3	+2	09.1	58	1	13	2	46	40		23	4	42	98
2	210	55.1		21.3	260	41.2		25.4	56	1	48	3	02	3	51	24	7	39	94
3	225	55.1		21.9	275	13.1		41.6	54	2	12	16	4	01	25	10	36	94	
4	240	55.1		22.5	289	44.9	+2	57.9	52	31		28	09	26	13	34	87		
5	255	55.1	+18	23.1	304	16.6	+3	14.1	50	2	47	3	38	4	17	2	27	15	15
6	270	55.1	+18	23.7	318	48.3	+3	30.4	45	3	17	4	00	4	33	2	29	20	15
7	285	55.1		24.4	333	20.0	+3	46.7	40	39		16	47	30	25	22	74		
8	300	55.1		25.0	347	51.5	+4	03.0	35	3	56	30	4	58	32	28	19	70	
9	315	55.1		25.6	2	23.0		19.3	30	4	11	4	42	5	08	33	32	16	66
10	330	55.1		26.2	16	54.5		35.6	20	33		5	01	25	35	38	10	60	
11	345	55.1	+18	26.8	31	25.8	+4	51.9	10 N	4	51	5	17	5	39	2	37	43	15
12	0	55.1	+18	27.4	45	57.1	+5	08.2	0	5	06	5	53	2	39	48	15	01	50
13	15	55.1		28.0	60	28.4		24.4	10 S	19		44	6	06	41	53	14	57	45
14	30	55.1		28.6	74	59.5		40.7	20	31		57	20	43	58	52	40		
15	45	55.1		29.3	89	30.6	+5	57.0	30	42		6	11	36	45	65	47	34	
16	60	55.1		29.9	104	01.6	+6	13.3	35	48		19	46	47	68	44	30		
17	75	55.1	+18	30.5	118	32.5	+6	29.5	40	5	55	6	27	6	56	2	48	72	14
18	90	55.1	+18	31.1	133	03.4	+6	45.8	45	6	02	6	37	7	09	2	50	77	14
19	105	55.1		31.7	147	34.2	+7	02.0	50	09		48	24	52	83	32	16		
20	120	55.1		32.3	162	04.9		18.3	52	12		54	31	54	85	30	13		
21	135	55.1		32.9	176	35.5		34.5	54	16		6	59	39	55	88	28	10	
22	150	55.1		33.5	191	06.0	+7	50.7	56	20		7	05	47	56	92	25	8	
23	165	55.1		34.1	205	36.5	+8	06.8	58	24		12	7	57	57	96	22	4	
24	180	55.1	+18	34.7	220	06.8	+8	23.0	60 S	6	28	7	20	8	09	2	59	99	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 35.5 ^m		Mag: -3.9 PMG: 14 ^h 06 ^m		Mag: +1.2 PMG: 10 ^h 12 ^m		Mag: -2.0 PMG: 16 ^h 05 ^m		Mag: +0.9 PMG: 9 ^h 17 ^m	
	hG ♂		hG ♀		hG ♂		hG ♀		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	230	46.1	148	44.3	+24	37.6	206	49.3	+9	07.5
1	245	48.5	163	43.4		37.9	221	50.0		08.2
2	260	51.0	178	42.6		38.1	236	50.7		08.9
3	275	53.5	193	41.8		38.4	251	51.4		09.6
4	290	55.9	208	41.0		38.7	266	52.1		10.3
5	305	58.4	223	40.1	+24	38.9	281	52.7	+9	11.0
6	321	00.9	238	39.3	+24	39.2	296	53.4	+9	11.7
7	336	03.3	253	38.5		39.4	311	54.1		12.4
8	351	05.8	268	37.7		39.7	326	54.8		13.1
9	6	08.2	283	36.8		39.9	341	55.5		13.8
10	21	10.7	298	36.0		40.2	356	56.2		14.6
11	36	13.2	313	35.2	+24	40.4	11	56.8	+9	15.3
12	51	15.6	328	34.3	+24	40.6	26	57.5	+9	16.0
13	66	18.1	343	33.5		40.9	41	58.2		16.7
14	81	20.6	358	32.7		41.1	56	58.9		17.4
15	96	23.0	13	31.9		41.4	71	59.6		18.1
16	111	25.5	28	31.0		41.6	87	00.3		18.8
17	126	28.0	43	30.2	+24	41.8	102	01.0	+9	19.5
18	141	30.4	58	29.4	+24	42.1	117	01.6	+9	20.2
19	156	32.9	73	28.5		42.3	132	02.3		20.9
20	171	35.3	88	27.7		42.6	147	03.0		21.6
21	186	37.8	103	26.9		42.8	162	03.7		22.3
22	201	40.3	118	26.1		43.0	177	04.4		23.0
23	216	42.7	133	25.2		43.3	192	05.1		23.7
24	231	45.2	148	24.4	+24	43.5	207	05.7	+9	24.4
Dif	—		-8		+2		+7		+7	
							+20		-1	
									+22	
									+1	

UT	SOL			LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 56.3 ^m			Edad: 26.5 ^d SD: 16'2 PMG: 9 ^h 39 ^m PHE { 4 ^h : 59'6 12 ^h : 59'8 20 ^h : 60'1 R°: 54 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	° /	° /	° /	° /		° /		°	h m	h m	h m	h m m	h m m	h m m		
0	180	55.1	+18	34.7		220	06.8	+8	23.0	60 N	20 30	21 33	** **	2 22	2	17 28 112
1	195	55.1		35.3		234	37.1	113	39.1	58	16	21 12	22 51	27	6	20 107
2	210	55.1		35.9		249	07.3	112	55.2	56	20 05	20 55	22 12	31	10	13 102
3	225	55.1		36.6		263	37.4	111	11.3	54	19 55	40	21 46	35	14	07 97
4	240	55.1		37.2		278	07.4	110	27.4	52	46	28	26	39	16	17 01 94
5	255	55.1	+18	37.8		292	37.3	109	43.4	50	19 38	20 17	21 10	2 42	19	16 56 91
6	270	55.1	+18	38.4		307	07.1	108	59.4	45	19 21	19 55	20 39	2 49	25	16 45 85
7	285	55.1		39.0		321	36.9	108	15.3	40	19 07	38	20 16	2 55	30	36 80
8	300	55.1		39.6		336	06.5	106	31.3	35	18 56	24	19 58	3 00	34	29 75
9	315	55.1		40.2		350	36.0	105	47.1	30	46	19 12	43	05	37	22 72
10	330	55.1		40.8		5	05.5	105	03.0	20	29	18 52	20	13	43	10 66
11	345	55.1	+18	41.4		19	34.8	103	18.8	10 N	18 14	18 36	19 02	3 20	49	16 00 61
12	0	55.1	+18	42.0		34	04.0	102	34.6	0	18 00	18 22	18 47	3 27	53	15 51 56
13	15	55.1		42.6		48	33.1	101	50.3	10 S	17 46	18 08	34	34	58	42 50
14	30	55.1		43.2		63	02.2	101	06.0	20	32	17 55	22	41	64	32 45
15	45	55.1		43.8		77	31.1	99	21.6	30	15	41	10	50	70	21 39
16	60	55.1		44.4		91	59.9	98	37.2	35	17 06	33	18 03	3 55	73	14 36
17	75	55.1	+18	45.0		106	28.6	97	52.7	40	16 55	17 24	17 57	4 00	78	15 07 32
18	90	55.1	+18	45.6		120	57.2	96	08.1	45	16 42	17 14	17 50	4 07	83	14 58 28
19	105	55.1		46.2		135	25.7	95	23.5	50	27	17 02	42	15	89	48 22
20	120	55.1		46.8		149	54.1	94	38.9	52	20	16 57	38	19	92	43 19
21	135	55.1		47.3		164	22.3	92	54.2	54	12	51	35	23	95	38 16
22	150	55.1		47.9		178	50.5	92	09.4	56	16 03	45	31	28	99	33 11
23	165	55.0		48.5		193	18.5	90	24.6	58	15 53	38	27	33	103	26 8
24	180	55.0	+18	49.1		207	46.4	89	39.7	60 S	15 41	16 30	17 22	4 38	109	14 19 3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 31.6 ^m		Mag: -3.9 PMG: 14 ^h 07 ^m		Mag: +1.2 PMG: 10 ^h 11 ^m		Mag: -1.9 PMG: 16 ^h 01 ^m		Mag: +0.9 PMG: 9 ^h 14 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /								
0	231	45.2	148	24.4	+24	43.5	207	05.7	+9	24.4	119	06.3	+22	12.6	221	11.5	+2	08.9
1	246	47.7	163	23.6		43.7	222	06.4		25.1	134	08.3		12.5	236	13.7		09.0
2	261	50.1	178	22.7		43.9	237	07.1		25.8	149	10.4		12.5	251	15.9		09.1
3	276	52.6	193	21.9		44.2	252	07.8		26.5	164	12.4		12.4	266	18.1		09.2
4	291	55.1	208	21.1		44.4	267	08.5		27.2	179	14.4		12.4	281	20.4		09.3
5	306	57.5	223	20.2	+24	44.6	282	09.2	+9	27.9	194	16.4	+22	12.3	296	22.6	+2	09.4
6	322	00.0	238	19.4	+24	44.8	297	09.8	+9	28.6	209	18.5	+22	12.2	311	24.8	+2	09.5
7	337	02.5	253	18.6		45.1	312	10.5		29.3	224	20.5		12.2	326	27.0		09.6
8	352	04.9	268	17.8		45.3	327	11.2		30.0	239	22.5		12.1	341	29.3		09.7
9	7	07.4	283	16.9		45.5	342	11.9		30.7	254	24.5		12.1	356	31.5		09.8
10	22	09.8	298	16.1		45.7	357	12.6		31.4	269	26.6		12.0	11	33.7		09.9
11	37	12.3	313	15.3	+24	45.9	12	13.3	+9	32.1	284	28.6	+22	11.9	26	35.9	+2	10.0
12	52	14.8	328	14.4	+24	46.1	27	13.9	+9	32.8	299	30.6	+22	11.9	41	38.2	+2	10.1
13	67	17.2	343	13.6		46.4	42	14.6		33.5	314	32.7		11.8	56	40.4		10.2
14	82	19.7	358	12.8		46.6	57	15.3		34.2	329	34.7		11.7	71	42.6		10.3
15	97	22.2	13	11.9		46.8	72	16.0		34.9	344	36.7		11.7	86	44.8		10.3
16	112	24.6	28	11.1		47.0	87	16.7		35.6	359	38.7		11.6	101	47.1		10.4
17	127	27.1	43	10.3	+24	47.2	102	17.3	+9	36.3	14	40.8	+22	11.6	116	49.3	+2	10.5
18	142	29.6	58	09.5	+24	47.4	117	18.0	+9	37.0	29	42.8	+22	11.5	131	51.5	+2	10.6
19	157	32.0	73	08.6		47.6	132	18.7		37.7	44	44.8		11.4	146	53.7		10.7
20	172	34.5	88	07.8		47.8	147	19.4		38.4	59	46.8		11.4	161	56.0		10.8
21	187	36.9	103	07.0		48.0	162	20.1		39.1	74	48.9		11.3	176	58.2		10.9
22	202	39.4	118	06.1		48.2	177	20.8		39.8	89	50.9		11.3	192	00.4		11.0
23	217	41.9	133	05.3		48.4	192	21.4		40.5	104	52.9		11.2	207	02.7		11.1
24	232	44.3	148	04.5	+24	48.6	207	22.1	+9	41.2	119	54.9	+22	11.1	222	04.9	+2	11.2
Dif	—		-8		+2		+7		+7		+20		-1		+22		+1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15'8 PMG:11 ^h 56.3 ^m				Edad: 27.5 ^d SD: 16'4 PMG: 10 ^h 32 ^m															
	hG ☉ Dec				hG ☾ Dif Dec Dif					Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	180	55.0	+18	49.1	207	46.4	+14	39.7	60 N	1 01	2 19	3 22	2 23	3	19 19	118				
1	195	55.0		49.7	222	14.2	+14	54.7	58	1 01	40	36	32	9	19 05	110				
2	210	55.0		50.3	236	41.9	+15	09.7	56	1 40	2 57	47	40	13	18 53	105				
3	225	55.0		50.9	251	09.5		24.5	54	2 06	3 12	3 57	47	17	43 10					
4	240	55.0		51.5	265	36.9		39.3	52	26	24	4 06	2 54	20	34 96					
5	255	55.0	+18	52.1	280	04.2	+15	54.1	50	2 42	3 35	4 14	3 00	23	18 26	92				
6	270	55.0	+18	52.7	294	31.4	+16	08.7	45	3 14	3 57	4 31	3 13	29	18 09	86				
7	285	55.0		53.3	308	58.5		23.3	40	36	4 14	45	23	35	17 55	81				
8	300	55.0		53.9	323	25.5		37.7	35	3 54	28	4 57	32	39	43 77					
9	315	55.0		54.4	337	52.3	+16	52.1	30	4 09	4 41	5 07	41	41	32 74					
10	330	55.0		55.0	352	19.0	+17	06.4	20	32	5 00	24	3 55	47	17 15	68				
11	345	55.0	+18	55.6	6	45.6	+17	20.6	10 N	4 50	5 17	5 39	4 07	52	16 59	64				
12	0	54.9	+18	56.2	21	12.1	+17	34.7	0	5 06	5 31	5 53	4 19	57	16 45	60				
13	15	54.9		56.8	35	38.4	+17	48.8	10 S	19	44	6 07	31	61	31 55					
14	30	54.9		57.4	50	04.6	+18	02.7	20	31	5 58	21	44	66	16 16	51				
15	45	54.9		58.0	64	30.7		16.5	30	43	6 12	38	4 58	73	15 59	45				
16	60	54.9		58.6	78	56.7		30.2	35	50	20	47	5 07	76	49 42					
17	75	54.9	+18	59.1	93	22.5	+18	43.8	40	5 56	6 29	6 58	5 17	80	15 37	39				
18	90	54.9	+18	59.7	107	48.2	+18	57.3	45	6 03	6 39	7 11	5 29	85	15 24	34				
19	105	54.9	+19	00.3	122	13.8	+19	10.7	50	11	51	27	43	92	08 27					
20	120	54.9		00.9	136	39.2		24.0	52	15	6 56	34	49	96	15 01	24				
21	135	54.9		01.5	151	04.5		37.1	54	19	7 02	42	5 57	99	14 52	21				
22	150	54.8		02.0	165	29.7	+19	50.2	56	23	09	7 51	6 05	104	43 16					
23	165	54.8		02.6	179	54.8	+20	03.1	58	27	16	8 01	15	109	33 10					
24	180	54.8	+19	03.2	194	19.7	+20	15.9	60 S	6 32	7 24	8 13	6 26	116	14 21	4				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 27.7 ^m				Mag: -3.9 PMG: 14 ^h 08 ^m				Mag: +1.2 PMG: 10 ^h 10 ^m				Mag: -1.9 PMG: 15 ^h 58 ^m				Mag: +0.9 PMG: 9 ^h 10 ^m			
	hG ♈ Dec				hG ♀ Dec				hG ♂ Dec				hG ♃ Dec				hG ♄ Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	232	44.3	148	04.5	+24	48.6	207	22.1	+9	41.2	119	54.9	+22	11.1	222	04.9	+2	11.2		
1	247	46.8	163	03.6		48.8	222	22.8		41.9	134	57.0		11.1	237	07.1		11.3		
2	262	49.3	178	02.8		49.0	237	23.5		42.6	149	59.0		11.0	252	09.3		11.4		
3	277	51.7	193	02.0		49.2	252	24.2		43.3	165	01.0		10.9	267	11.6		11.5		
4	292	54.2	208	01.1		49.4	267	24.9		44.0	180	03.0		10.9	282	13.8		11.6		
5	307	56.7	223	00.3	+24	49.6	282	25.5	+9	44.7	195	05.0	+22	10.8	297	16.0	+2	11.7		
6	322	59.1	237	59.5	+24	49.8	297	26.2	+9	45.4	210	07.1	+22	10.8	312	18.2	+2	11.7		
7	338	01.6	252	58.6		50.0	312	26.9		46.1	225	09.1		10.7	327	20.5		11.8		
8	353	04.1	267	57.8		50.2	327	27.6		46.8	240	11.1		10.6	342	22.7		11.9		
9	8	06.5	282	57.0		50.4	342	28.3		47.5	255	13.1		10.6	357	24.9		12.0		
10	23	09.0	297	56.2		50.6	357	28.9		48.2	270	15.2		10.5	12	27.2		12.1		
11	38	11.4	312	55.3	+24	50.7	12	29.6	+9	48.9	285	17.2	+22	10.4	27	29.4	+2	12.2		
12	53	13.9	327	54.5	+24	50.9	27	30.3	+9	49.6	300	19.2	+22	10.4	42	31.6	+2	12.3		
13	68	16.4	342	53.7		51.1	42	31.0		50.3	315	21.2		10.3	57	33.8		12.4		
14	83	18.8	357	52.8		51.3	57	31.7		51.0	330	23.2		10.3	72	36.1		12.5		
15	98	21.3	12	52.0		51.5	72	32.4		51.7	345	25.3		10.2	87	38.3		12.6		
16	113	23.8	27	51.2		51.7	87	33.0		52.4	0	27.3		10.1	102	40.5		12.7		
17	128	26.2	42	50.3	+24	51.8	102	33.7	+9	53.1	15	29.3	+22	10.1	117	42.7	+2	12.8		
18	143	28.7	57	49.5	+24	52.0	117	34.4	+9	53.8	30	31.3	+22	10.0	132	45.0	+2	12.9		
19	158	31.2	72	48.7		52.2	132	35.1		54.5	45	33.3		09.9	147	47.2		13.0		
20	173	33.6	87	47.8		52.4	147	35.8		55.2	60	35.4		09.9	162	49.4		13.0		
21	188	36.1	102	47.0		52.5	162	36.4		55.9	75	37.4		09.8	177	51.7		13.1		
22	203	38.6	117	46.2		52.7	177	37.1		56.6	90	39.4		09.8	192	53.9		13.2		
23	218	41.0	132	45.3		52.9	192	37.8		57.3	105	41.4		09.7	207	56.1		13.3		
24	233	43.5	147	44.5	+24	53.1	207	38.5	+9	57.9	120	43.5	+22	09.6	222	58.3	+2	13.4		
Dif	—				-8 +2				+7 +7				+20 -1				+22 +1			

UT	SOL			● LUNA					Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 56.4 ^m			Edad: 28.5 ^d SD: 16'6 PMG: 11 ^h 30 ^m							PHE { 4 ^h : 60'9 12 ^h : 61'1 20 ^h : 61'1 R°: 65 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	R°	Hora	R°	
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m			
0	180	54.8	+19 03.2	194	19.7	+20 15.9		60 N	20 34	21 39	** **	2 26 10	21 17 116						
1	195	54.8	03.8	208	44.5	28.5	126	58	20	21 17	23 05	41 17	20 55 106						
2	210	54.8	04.4	223	09.2	41.1	124	56	20 09	20 59	22 20	2 53 23	38 100						
3	225	54.8	04.9	237	33.7	53.5	123	54	19 58	44	21 52	3 04 28	23 95						
4	240	54.8	05.5	251	58.1	53	121	52	49	32	31	14 32	20 10 92						
5	255	54.7	+19 06.1	266	22.4	+21 17.9		50	19 41	20 21	21 14	3 23 34	19 58 90						
6	270	54.7	+19 06.7	280	46.6	+21 29.9	120	45	19 23	19 58	20 42	3 42 40	19 35 84						
7	285	54.7	07.3	295	10.6	41.8	119	40	19 09	40	18	3 58 44	16 81						
8	300	54.7	07.8	309	34.5	53.5	117	35	18 57	26	20 00	4 11 48	19 00 78						
9	315	54.7	08.4	323	58.3	48	116	30	47	19 13	19 45	22 51	18 46 76						
10	330	54.7	09.0	338	21.9	46	114	20	29	18 53	21	42 56	23 73						
11	345	54.7	+19 09.6	352	45.4	+22 27.8	113	10 N	18 14	18 36	19 03	4 59 60	18 03 69						
12	0	54.6	+19 10.1	7	08.8	+22 39.0	112	0	18 00	18 22	18 47	5 16 64	17 45 66						
13	15	54.6	10.7	21	32.1	+22 50.0	110	10 S	17 46	18 08	34	32 68	26 63						
14	30	54.6	11.3	35	55.3	+23 00.8	108	20	31	17 54	21	5 50 72	17 07 59						
15	45	54.6	11.8	50	18.3	11.5	107	30	14	40	08	6 11 76	16 44 56						
16	60	54.6	12.4	64	41.2	22.0	105	35	17 04	31	18 02	23 79	31 53						
17	75	54.6	+19 13.0	79	04.0	+23 32.3	103	40	16 53	17 22	17 55	6 37 83	16 16 50						
18	90	54.5	+19 13.6	93	26.7	+23 42.5	102	45	16 40	17 12	17 48	6 54 87	15 58 46						
19	105	54.5	14.1	107	49.2	+23 52.5	100	50	24	17 00	40	7 15 93	35 41						
20	120	54.5	14.7	122	11.6	+24 02.4	99	52	17	16 55	36	25 96	25 37						
21	135	54.5	15.3	136	34.0	12.0	96	54	16 09	49	32	36 100	15 13 34						
22	150	54.5	15.8	150	56.2	21.5	95	56	15 59	42	28	7 49 105	14 59 30						
23	165	54.5	16.4	165	18.3	30.9	94	58	49	35	24	8 04 112	43 23						
24	180	54.4	+19 17.0	179	40.2	+24 40.0	91	60 S	15 37	16 26	17 19	8 22 122	14 25 13						

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 8 ^h 23.7 ^m			Mag: -3.9 PMG: 14 ^h 10 ^m			Mag: +1.2 PMG: 10 ^h 09 ^m			Mag: -1.9 PMG: 15 ^h 55 ^m			Mag: +0.9 PMG: 9 ^h 07 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	233	43.5	147 44.5	+24 53.1	207 38.5	+9 57.9	120 43.5	+22 09.6	222 58.3	+2 13.4					
1	248	45.9	162 43.7	53.2	222 39.2	58.6	135 45.5	09.6	238 00.6	13.5					
2	263	48.4	177 42.8	53.4	237 39.9	+9 59.3	150 47.5	09.5	253 02.8	13.6					
3	278	50.9	192 42.0	53.6	252 40.5	+10 00.0	165 49.5	09.4	268 05.0	13.7					
4	293	53.3	207 41.2	53.7	267 41.2	+10 00.7	180 51.5	09.4	283 07.3	13.8					
5	308	55.8	222 40.3	+24 53.9	282 41.9	+10 01.4	195 53.5	+22 09.3	298 09.5	+2 13.9					
6	323	58.3	237 39.5	+24 54.1	297 42.6	+10 02.1	210 55.6	+22 09.2	313 11.7	+2 14.0					
7	339	00.7	252 38.7	54.2	312 43.3	02.8	225 57.6	09.2	328 13.9	14.1					
8	354	03.2	267 37.8	54.4	327 43.9	03.5	240 59.6	09.1	343 16.2	14.1					
9	9	05.7	282 37.0	54.5	342 44.6	04.2	256 01.6	09.1	358 18.4	14.2					
10	24	08.1	297 36.2	54.7	357 45.3	04.9	271 03.6	09.0	13 20.6	14.3					
11	39	10.6	312 35.3	+24 54.9	12 46.0	+10 05.6	286 05.7	+22 08.9	28 22.9	+2 14.4					
12	54	13.1	327 34.5	+24 55.0	27 46.7	+10 06.3	301 07.7	+22 08.9	43 25.1	+2 14.5					
13	69	15.5	342 33.7	55.2	42 47.3	07.0	316 09.7	08.8	58 27.3	14.6					
14	84	18.0	357 32.8	55.3	57 48.0	07.6	331 11.7	08.7	73 29.6	14.7					
15	99	20.4	12 32.0	55.5	72 48.7	08.3	346 13.7	08.7	88 31.8	14.8					
16	114	22.9	27 31.2	55.6	87 49.4	09.0	1 15.7	08.6	103 34.0	14.9					
17	129	25.4	42 30.3	+24 55.8	102 50.1	+10 09.7	16 17.8	+22 08.5	118 36.2	+2 15.0					
18	144	27.8	57 29.5	+24 55.9	117 50.7	+10 10.4	31 19.8	+22 08.5	133 38.5	+2 15.1					
19	159	30.3	72 28.7	56.1	132 51.4	11.1	46 21.8	08.4	148 40.7	15.2					
20	174	32.8	87 27.8	56.2	147 52.1	11.8	61 23.8	08.4	163 42.9	15.2					
21	189	35.2	102 27.0	56.4	162 52.8	12.5	76 25.8	08.3	178 45.2	15.3					
22	204	37.7	117 26.2	56.5	177 53.5	13.2	91 27.8	08.2	193 47.4	15.4					
23	219	40.2	132 25.3	56.7	192 54.1	13.9	106 29.9	08.2	208 49.6	15.5					
24	234	42.6	147 24.5	+24 56.8	207 54.8	+10 14.6	121 31.9	+22 08.1	223 51.9	+2 15.6					
Dif	—	-8	+2	+7	+7	+7	+20	-1	+22	+1					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56.4 ^m			Edad: 0.2 ^d PHE { 4 ^h : 61/2 12 ^h : 61/2 20 ^h : 61/2 PMG: 12 ^h 34 ^m R°: 67 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	180	54.4	+19	17.0	179	40.2	+24	40.0	90	60 N	***	2 13	3 18	2 34	23	23 12	82		
1	195	54.4		17.5	194	02.1		49.0	88	58	0 47	35	32	2 57	32	22 40	79		
2	210	54.4		18.1	208	23.9	+24	57.8	86	56	1 33	2 53	44	3 15	38	22 16	77		
3	225	54.4		18.7	222	45.6	+25	06.4	84	54	2 01	3 08	3 54	31	42	21 57	76		
4	240	54.4		19.2	237	07.1		14.8	82	52	21	21	4 03	44	45	40	76		
5	255	54.3	+19	19.8	251	28.6	+25	23.0	80	50	2 38	3 32	4 11	3 56	48	21 26	75		
6	270	54.3	+19	20.3	265	49.9	+25	31.1	81	45	3 11	3 54	4 29	4 21	52	20 58	73		
7	285	54.3		20.9	280	11.2		38.9	78	40	34	4 12	43	41	54	35	72		
8	300	54.3		21.5	294	32.4		46.6	77	35	3 53	27	4 55	4 57	57	17	71		
9	315	54.3		22.0	308	53.5	+25	54.0	74	30	4 08	4 39	5 05	5 12	59	20 01	70		
10	330	54.2		22.6	323	14.5	+26	01.3	73	20	31	5 00	23	37	61	19 34	69		
11	345	54.2	+19	23.2	337	35.4	+26	08.4	71	10 N	4 50	5 16	5 39	5 58	64	19 11	68		
12	0	54.2	+19	23.7	351	56.2	+26	15.3	69	0	5 05	5 31	5 53	6 18	67	18 49	68		
13	15	54.2		24.3	6	16.9		21.9	66	10 S	19	45	6 07	6 39	68	28	66		
14	30	54.2		24.8	20	37.6		28.4	65	20	32	5 59	22	7 00	71	18 05	65		
15	45	54.1		25.4	34	58.2		34.7	63	30	44	6 14	39	26	73	17 38	63		
16	60	54.1		25.9	49	18.7		40.7	60	35	51	22	6 49	41	75	22	63		
17	75	54.1	+19	26.5	63	39.1	+26	46.6	59	40	5 58	6 31	7 00	7 58	77	17 04	61		
18	90	54.1	+19	27.1	77	59.5	+26	52.2	56	45	6 05	6 41	7 13	8 20	79	16 42	59		
19	105	54.0		27.6	92	19.8	+26	57.7	55	50	14	53	29	8 47	82	15	56		
20	120	54.0		28.2	106	40.1	+27	02.9	52	52	17	6 59	37	9 00	84	16 01	55		
21	135	54.0		28.7	121	00.3		07.9	50	54	21	7 05	45	15	87	15 45	53		
22	150	54.0		29.3	135	20.4		12.7	48	56	25	12	7 55	33	90	27	50		
23	165	54.0		29.8	149	40.5		17.3	46	58	30	19	8 05	9 55	95	15 05	45		
24	180	53.9	+19	30.4	164	00.5	+27	21.7	44	60 S	6 35	7 27	8 18	10 23	105	14 36	36		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 19.8 ^m		Mag: -3.9 PMG: 14 ^h 11 ^m		Mag: +1.2 PMG: 10 ^h 08 ^m		Mag: -1.9 PMG: 15 ^h 52 ^m		Mag: +0.9 PMG: 9 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	234	42.6	147	24.5	+24	56.8	207	54.8	+10	14.6
1	249	45.1	162	23.7		56.9	222	55.5		15.2
2	264	47.5	177	22.8		57.1	237	56.2		15.9
3	279	50.0	192	22.0		57.2	252	56.9		16.6
4	294	52.5	207	21.2		57.3	267	57.5		17.3
5	309	54.9	222	20.3	+24	57.5	282	58.2	+10	18.0
6	324	57.4	237	19.5	+24	57.6	297	58.9	+10	18.7
7	339	59.9	252	18.7		57.7	312	59.6		19.4
8	355	02.3	267	17.8		57.9	328	00.3		20.1
9	10	04.8	282	17.0		58.0	343	00.9		20.8
10	25	07.3	297	16.2		58.1	358	01.6		21.4
11	40	09.7	312	15.3	+24	58.3	13	02.3	+10	22.1
12	55	12.2	327	14.5	+24	58.4	28	03.0	+10	22.8
13	70	14.7	342	13.7		58.5	43	03.7		23.5
14	85	17.1	357	12.8		58.6	58	04.3		24.2
15	100	19.6	12	12.0		58.8	73	05.0		24.9
16	115	22.0	27	11.2		58.9	88	05.7		25.6
17	130	24.5	42	10.3	+24	59.0	103	06.4	+10	26.2
18	145	27.0	57	09.5	+24	59.1	118	07.1	+10	26.9
19	160	29.4	72	08.7		59.2	133	07.7		27.6
20	175	31.9	87	07.8		59.4	148	08.4		28.3
21	190	34.4	102	07.0		59.5	163	09.1		29.0
22	205	36.8	117	06.2		59.6	178	09.8		29.7
23	220	39.3	132	05.3		59.7	193	10.5		30.4
24	235	41.8	147	04.5	+24	59.8	208	11.1	+10	31.0
Dif	—		-8		+1		+7		+7	
							+20		-1	
									+22	
									+1	

UT	SOL				● LUNA							Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 56.4 ^m				Edad: 1.2 ^d PHE { 4 ^h : 61'2 12 ^h : 61'1 20 ^h : 61'0 Rº: 68 ^m																	
	hG ☉	Dec			hG ☾	Dif			Dec	Dif	Civil			Náutico	Hora	Rº	Hora	Rº				
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	h m	h m	h m	h m m	h m m	h m m	h m m					
0	180	53.9	+19	30.4	164	00.5	10	+27	21.7	41	60 N	20 39	21 46	** **	2 57	61	** ** *					
1	195	53.9		30.9	178	20.5	10		25.8	40	58	24	22	23 25	3 29	64	23 59 **					
2	210	53.9		31.5	192	40.5	9		29.8	37	56	12	21 04	22 28	3 53	65	33 50					
3	225	53.9		32.0	207	00.4	9		33.5	35	54	20 01	20 48	21 58	4 13	66	23 13 52					
4	240	53.8		32.6	221	20.3	9		37.0	33	52	19 52	35	36	29 67	22 56	54					
5	255	53.8	+19	33.1	235	40.1	8	+27	40.3	35	50	19 44	20 24	21 18	4 44	67	22 41 56					
6	270	53.8	+19	33.7	249	59.9	8	+27	43.4	31	45	19 26	20 00	20 45	5 13	67	22 11 59					
7	285	53.8		34.2	264	19.7	8		46.2	28	40	19 11	19 42	21	35 69	21 47	61					
8	300	53.7		34.8	278	39.5	8		48.9	27	35	18 59	27	20 02	5 54	69	28 62					
9	315	53.7		35.3	292	59.3	8		51.3	24	30	48	19 15	19 46	6 11	68	21 11 64					
10	330	53.7		35.9	307	19.0	7		53.5	22	20	30	18 54	22	6 38	69	20 43 65					
11	345	53.6	+19	36.4	321	38.7	7	+27	55.4	19	10 N	18 15	18 37	19 03	7 02	69	20 19 67					
12	0	53.6	+19	37.0	335	58.5	8	+27	57.2	18	0	18 00	18 22	18 47	7 25	68	19 57 67					
13	15	53.6		37.5	350	18.2	7	+27	58.7	15	0 S	17 46	18 08	34	7 47	68	34 69					
14	30	53.6		38.1	4	37.9	7	+28	00.0	13	20	30	17 54	21	8 11	68	19 10 70					
15	45	53.5		38.6	18	57.6	7	+28	01.1	11	30	13	39	08	39 68	18 41	72					
16	60	53.5		39.2	33	17.4	8		02.0	9	35	17 03	30	18 01	8 56	67	25 72					
17	75	53.5	+19	39.7	47	37.1	7	+28	02.6	6	40	16 51	17 21	17 54	9 15	68	18 05 73					
18	90	53.5	+19	40.2	61	56.9	8	+28	03.0	4	45	16 38	17 10	17 46	9 39	67	17 41 74					
19	105	53.4		40.8	76	16.7	8		03.2	2	50	22	16 58	38	10 09	66	17 11 75					
20	120	53.4		41.3	90	36.5	8		03.2	0	52	14	52	34	24 66	16 56	76					
21	135	53.4		41.9	104	56.3	8		03.0	2	54	16 06	46	30	10 42	64	38 77					
22	150	53.3		42.4	119	16.2	9		02.5	5	56	15 56	39	25	11 03	64	16 17 79					
23	165	53.3		42.9	133	36.1	9		01.8	7	58	45	31	21	11 30	61	15 50 81					
24	180	53.3	+19	43.5	147	56.0	9	+28	00.9	9	60 S	15 33	16 23	17 16	12 08	57	15 12 86					

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 8 ^h 15.9 ^m		Mag: -3.9 PMG: 14 ^h 12 ^m		Mag: +1.2 PMG: 10 ^h 07 ^m		Mag: -1.9 PMG: 15 ^h 49 ^m		Mag: +0.9 PMG: 9 ^h 00 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /								
0	235	41.8	147	04.5	+24	59.8	208	11.1	+10	31.0	122	20.2	+22	06.5	224	45.4	+2	17.8
1	250	44.2	162	03.7	+24	59.9	223	11.8		31.7	137	22.2		06.5	239	47.7		17.9
2	265	46.7	177	02.8	+25	00.0	238	12.5		32.4	152	24.2		06.4	254	49.9		18.0
3	280	49.2	192	02.0	+25	00.1	253	13.2		33.1	167	26.2		06.3	269	52.1		18.1
4	295	51.6	207	01.2		00.2	268	13.9		33.8	182	28.2		06.3	284	54.4		18.1
5	310	54.1	222	00.3	+25	00.4	283	14.5	+10	34.5	197	30.3	+22	06.2	299	56.6	+2	18.2
6	325	56.5	236	59.5	+25	00.5	298	15.2	+10	35.1	212	32.3	+22	06.2	314	58.8	+2	18.3
7	340	59.0	251	58.7		00.6	313	15.9		35.8	227	34.3		06.1	330	01.1		18.4
8	356	01.5	266	57.8		00.7	328	16.6		36.5	242	36.3		06.0	345	03.3		18.5
9	11	03.9	281	57.0		00.8	343	17.2		37.2	257	38.3		06.0	0	05.5		18.6
10	26	06.4	296	56.2		00.9	358	17.9		37.9	272	40.3		05.9	15	07.8		18.7
11	41	08.9	311	55.3	+25	01.0	13	18.6	+10	38.6	287	42.3	+22	05.8	30	10.0	+2	18.8
12	56	11.3	326	54.5	+25	01.1	28	19.3	+10	39.2	302	44.3	+22	05.8	45	12.2	+2	18.9
13	71	13.8	341	53.7		01.2	43	20.0		39.9	317	46.3		05.7	60	14.5		19.0
14	86	16.3	356	52.8		01.2	58	20.6		40.6	332	48.3		05.6	75	16.7		19.0
15	101	18.7	11	52.0		01.3	73	21.3		41.3	347	50.4		05.6	90	18.9		19.1
16	116	21.2	26	51.2		01.4	88	22.0		42.0	2	52.4		05.5	105	21.2		19.2
17	131	23.7	41	50.3	+25	01.5	103	22.7	+10	42.7	17	54.4	+22	05.4	120	23.4	+2	19.3
18	146	26.1	56	49.5	+25	01.6	118	23.4	+10	43.3	32	56.4	+22	05.4	135	25.6	+2	19.4
19	161	28.6	71	48.7		01.7	133	24.0		44.0	47	58.4		05.3	150	27.9		19.5
20	176	31.0	86	47.8		01.8	148	24.7		44.7	63	00.4		05.2	165	30.1		19.6
21	191	33.5	101	47.0		01.9	163	25.4		45.4	78	02.4		05.2	180	32.3		19.7
22	206	36.0	116	46.2		02.0	178	26.1		46.1	93	04.4		05.1	195	34.6		19.8
23	221	38.4	131	45.3		02.0	193	26.7		46.7	108	06.4		05.0	210	36.8		19.9
24	236	40.9	146	44.5	+25	02.1	208	27.4	+10	47.4	123	08.4	+22	05.0	225	39.0	+2	19.9
Dif	—		-8		+1		+7		+7		+20		-1		+22		+1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15/8 PMG:11 ^h 56.5 ^m			Edad: 2.2 ^d PHE { 4 ^h : 60/8 12 ^h : 60/7 20 ^h : 60/5 SD: 16/6 PMG: 14 ^h 47 ^m R°: 63 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	180	53.3	+19	43.5	147	56.0	+28	00.9	11	60 N	** **	2 06	3 13	3 56	101		0 34	36	
1	195	53.3		44.0	162	16.0	+27	59.8	13	58	0 28	30	28	4 31	93	** **	** **	** **	
2	210	53.2		44.6	176	36.0		58.5	15	56	1 25	2 49	40	4 57	88	** **	** **	** **	
3	225	53.2		45.1	190	56.1		57.0	18	54	1 55	3 04	3 51	5 17	85	** **	** **	** **	
4	240	53.2		45.6	205	16.2		55.2	20	52	2 17	17	4 00	34	83	23 49	35		
5	255	53.1	+19	46.2	219	36.3	+27	53.2	22	50	2 34	3 29	4 09	5 49	81	23 36	37		
6	270	53.1	+19	46.7	233	56.6	+27	51.0	24	45	3 08	3 52	4 27	6 19	77	23 08	43		
7	285	53.1		47.2	248	16.9		48.6	26	40	32	4 10	41	6 42	75	22 47	46		
8	300	53.0		47.8	262	37.2		46.0	28	35	3 51	25	4 54	7 01	73	29	49		
9	315	53.0		48.3	276	57.6		43.2	30	30	4 06	38	5 04	18	71	22 13	52		
10	330	53.0		48.8	291	18.1		40.2	33	20	31	4 59	23	7 46	68	21 47	56		
11	345	52.9	+19	49.4	305	38.7	+27	36.9	34	10 N	4 50	5 16	5 38	8 09	67	21 24	59		
12	0	52.9	+19	49.9	319	59.3	+27	33.5	37	0	5 05	5 31	5 53	8 32	64	21 03	62		
13	15	52.9		50.4	334	20.1		29.8	38	10 S	19	45	6 07	8 54	62	20 41	65		
14	30	52.8		51.0	348	40.9		26.0	41	20	33	5 59	23	9 18	59	20 18	68		
15	45	52.8		51.5	3	01.8		21.9	43	30	46	6 15	40	9 46	56	19 51	72		
16	60	52.8		52.0	17	22.7		17.6	44	35	5 52	23	6 50	10 02	55	35	74		
17	75	52.7	+19	52.6	31	43.8	+27	13.2	47	40	6 00	6 33	7 02	10 21	53	19 16	77		
18	90	52.7	+19	53.1	46	05.0	+27	08.5	49	45	6 07	6 43	7 15	10 44	50	18 54	80		
19	105	52.7		53.6	60	26.2	+27	03.6	50	50	16	6 56	32	11 14	45	25	85		
20	120	52.6		54.1	74	47.6	+26	58.6	53	52	20	7 02	40	28	43	18 11	87		
21	135	52.6		54.7	89	09.0		53.3	54	54	24	08	48	11 45	40	17 54	91		
22	150	52.6		55.2	103	30.6		47.9	56	56	28	15	7 58	12 05	36	34	96		
23	165	52.5		55.7	117	52.3		42.3	58	58	33	22	8 09	12 30	29	17 10	101		
24	180	52.5	+19	56.2	132	14.0	+26	36.5	58	60 S	6 38	7 31	8 22	13 04	19	16 36	113		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 8 ^h 11.9 ^m		Mag: -3.9 PMG: 14 ^h 14 ^m			Mag: +1.2 PMG: 10 ^h 06 ^m			Mag: -1.9 PMG: 15 ^h 45 ^m			Mag: +0.9 PMG: 8 ^h 56 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	236	40.9	146	44.5	+25	02.1	208	27.4	+10	47.4	123	08.4	+22	05.0	225	39.0	+2	19.9
1	251	43.4	161	43.7		02.2	223	28.1		48.1	138	10.4		04.9	240	41.3		20.0
2	266	45.8	176	42.8		02.3	238	28.8		48.8	153	12.4		04.8	255	43.5		20.1
3	281	48.3	191	42.0		02.4	253	29.5		49.5	168	14.5		04.8	270	45.7		20.2
4	296	50.8	206	41.2		02.4	268	30.1		50.1	183	16.5		04.7	285	48.0		20.3
5	311	53.2	221	40.3	+25	02.5	283	30.8	+10	50.8	198	18.5	+22	04.6	300	50.2	+2	20.4
6	326	55.7	236	39.5	+25	02.6	298	31.5	+10	51.5	213	20.5	+22	04.6	315	52.4	+2	20.5
7	341	58.2	251	38.7		02.7	313	32.2		52.2	228	22.5		04.5	330	54.7		20.6
8	357	00.6	266	37.8		02.7	328	32.8		52.9	243	24.5		04.4	345	56.9		20.7
9	12	03.1	281	37.0		02.8	343	33.5		53.5	258	26.5		04.4	0	59.2		20.7
10	27	05.5	296	36.2		02.9	358	34.2		54.2	273	28.5		04.3	16	01.4		20.8
11	42	08.0	311	35.3	+25	02.9	13	34.9	+10	54.9	288	30.5	+22	04.2	31	03.6	+2	20.9
12	57	10.5	326	34.5	+25	03.0	28	35.5	+10	55.6	303	32.5	+22	04.2	46	05.9	+2	21.0
13	72	12.9	341	33.7		03.1	43	36.2		56.2	318	34.5		04.1	61	08.1		21.1
14	87	15.4	356	32.8		03.1	58	36.9		56.9	333	36.5		04.0	76	10.3		21.2
15	102	17.9	11	32.0		03.2	73	37.6		57.6	348	38.5		04.0	91	12.6		21.3
16	117	20.3	26	31.2		03.3	88	38.3		58.3	3	40.5		03.9	106	14.8		21.4
17	132	22.8	41	30.3	+25	03.3	103	38.9	+10	58.9	18	42.5	+22	03.8	121	17.0	+2	21.4
18	147	25.3	56	29.5	+25	03.4	118	39.6	+10	59.6	33	44.5	+22	03.8	136	19.3	+2	21.5
19	162	27.7	71	28.7		03.4	133	40.3	+11	00.3	48	46.5		03.7	151	21.5		21.6
20	177	30.2	86	27.8		03.5	148	41.0		01.0	63	48.6		03.6	166	23.8		21.7
21	192	32.7	101	27.0		03.6	163	41.6		01.6	78	50.6		03.6	181	26.0		21.8
22	207	35.1	116	26.2		03.6	178	42.3		02.3	93	52.6		03.5	196	28.2		21.9
23	222	37.6	131	25.3		03.7	193	43.0		03.0	108	54.6		03.4	211	30.5		22.0
24	237	40.0	146	24.5	+25	03.7	208	43.7	+11	03.7	123	56.6	+22	03.4	226	32.7	+2	22.1
Dif	—		—8		+1		+7		+7		+20		-1		+22		+1	

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG:11 ^h 56.5 ^m			Edad: 3.2 ^d SD: 16'4 PMG: 15 ^h 50 ^m		PHE { 4 ^h : 60'3 12 ^h : 60'0 20 ^h : 59'8 R°: 59 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora
h	° /	° /	° /	° /		° /		°		h m	h m	h m	h m m	h m m	h m m	
0	180	52.5	+19	56.2		132	14.0	29	+26	36.5	60	60 N	20 43	21 53	** **	5 37 114
1	195	52.5		56.8		146	35.9	30		30.5	62	58	28	28	** **	6 04 105
2	210	52.4		57.3		160	57.9	31		24.3	64	56	16	21 08	22 36	25 99
3	225	52.4		57.8		175	20.0	33		17.9	66	54	20 05	20 52	22 04	42 95
4	240	52.4		58.3		189	42.3	33		11.3	66	52	19 55	39	21 40	6 57 91
5	255	52.3	+19	58.9		204	04.6	33	+26	04.6	67	50	19 46	20 27	21 22	7 10 88
6	270	52.3	+19	59.4		218	27.1	35	+25	57.7	69	45	19 28	20 03	20 48	7 36 82
7	285	52.2	+19	59.9		232	49.6	35		50.6	71	40	13	19 44	23	7 57 78
8	300	52.2	+20	00.4		247	12.3	37		43.3	73	35	19 00	29	20 04	8 14 75
9	315	52.2		00.9		261	35.2	39		35.9	74	30	18 50	19 16	19 48	29 72
10	330	52.1		01.5		275	58.1	39		28.3	76	20	31	18 55	23	8 54 68
11	345	52.1	+20	02.0		290	21.2	41	+25	20.5	78	10 N	18 15	18 37	19 04	9 16 63
12	0	52.1	+20	02.5		304	44.4	42	+25	12.6	79	0	18 00	18 22	18 48	9 36 60
13	15	52.0		03.0		319	07.7	43	+25	04.5	81	10 S	17 45	18 08	33	9 56 57
14	30	52.0		03.5		333	31.2	45	+24	56.2	83	20	30	17 53	20	10 17 53
15	45	51.9		04.0		347	54.8	46		47.8	84	30	12	38	07	42 49
16	60	51.9		04.6		2	18.5	47		39.2	86	35	17 02	29	18 00	10 57 45
17	75	51.9	+20	05.1		16	42.4	49	+24	30.5	87	40	16 50	17 19	17 52	11 14 42
18	90	51.8	+20	05.6		31	06.4	50	+24	21.6	89	45	16 36	17 08	17 44	11 34 38
19	105	51.8		06.1		45	30.5	51		12.6	90	50	19	16 56	36	11 59 32
20	120	51.7		06.6		59	54.8	53	+24	03.4	92	52	11	50	32	12 11 29
21	135	51.7		07.1		74	19.2	54	+23	54.0	94	54	16 03	43	27	25 25
22	150	51.7		07.6		88	43.7	55		44.5	95	56	15 53	36	23	41 21
23	165	51.6		08.1		103	08.4	57		34.9	96	58	42	28	18	12 59 16
24	180	51.6	+20	08.7		117	33.2	58	+23	25.2	97	60 S	15 29	16 20	17 13	13 23 7

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 8 ^h 08.0 ^m		Mag: -3.9 PMG: 14 ^h 15 ^m			Mag: +1.3 PMG: 10 ^h 05 ^m			Mag: -1.9 PMG: 15 ^h 42 ^m			Mag: +0.9 PMG: 8 ^h 52 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /		
0	237	40.0	146	24.5	+25	03.7	208	43.7	+11	03.7	123	56.6	+22	03.4		
1	252	42.5	161	23.7		03.8	223	44.3		04.3	138	58.6		03.3		
2	267	45.0	176	22.9		03.8	238	45.0		05.0	154	00.6		03.2		
3	282	47.4	191	22.0		03.9	253	45.7		05.7	169	02.6		03.2		
4	297	49.9	206	21.2		03.9	268	46.4		06.4	184	04.6		03.1		
5	312	52.4	221	20.4	+25	04.0	283	47.1	+11	07.0	199	06.6	+22	03.0		
6	327	54.8	236	19.5	+25	04.0	298	47.7	+11	07.7	214	08.6	+22	03.0		
7	342	57.3	251	18.7		04.0	313	48.4		08.4	229	10.6		02.9		
8	357	59.8	266	17.9		04.1	328	49.1		09.1	244	12.6		02.8		
9	13	02.2	281	17.0		04.1	343	49.8		09.7	259	14.6		02.8		
10	28	04.7	296	16.2		04.2	358	50.4		10.4	274	16.6		02.7		
11	43	07.2	311	15.4	+25	04.2	13	51.1	+11	11.1	289	18.6	+22	02.6		
12	58	09.6	326	14.5	+25	04.2	28	51.8	+11	11.8	304	20.6	+22	02.5		
13	73	12.1	341	13.7		04.3	43	52.5		12.4	319	22.6		02.5		
14	88	14.5	356	12.9		04.3	58	53.1		13.1	334	24.6		02.4		
15	103	17.0	11	12.1		04.4	73	53.8		13.8	349	26.6		02.3		
16	118	19.5	26	11.2		04.4	88	54.5		14.4	4	28.6		02.3		
17	133	21.9	41	10.4	+25	04.4	103	55.2	+11	15.1	19	30.6	+22	02.2		
18	148	24.4	56	09.6	+25	04.4	118	55.8	+11	15.8	34	32.6	+22	02.1		
19	163	26.9	71	08.7		04.5	133	56.5		16.5	49	34.6		02.1		
20	178	29.3	86	07.9		04.5	148	57.2		17.1	64	36.6		02.0		
21	193	31.8	101	07.1		04.5	163	57.9		17.8	79	38.6		01.9		
22	208	34.3	116	06.2		04.6	178	58.5		18.5	94	40.6		01.9		
23	223	36.7	131	05.4		04.6	193	59.2		19.1	109	42.6		01.8		
24	238	39.2	146	04.6	+25	04.6	208	59.9	+11	19.8	124	44.6	+22	01.7		
Dif	—		-8			0	+7			+7	+20			-1	+22	+1

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG:11 ^h 56.6 ^m				Edad: 4.2 ^d PHE { 4 ^h : 59/5 12 ^h : 59/2 20 ^h : 58/9 PMG: 16 ^h 48 ^m R°: 52 ^m													
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico	Civil	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	180	51.6	+20	08.7	117	33.2	+23	25.2	60 N	** **	2 00	3 09	7 30 107	1 23 4				
1	195	51.5		09.2	131	58.2		15.3	58	** **	25	24	7 48 100	1 04 11				
2	210	51.5		09.7	146	23.3	+23	05.2	56	1 16	2 44	37	8 02 96	0 49 16				
3	225	51.5		10.2	160	48.5	+22	55.0	54	1 49	3 00	48	15 92	35 20				
4	240	51.4		10.7	175	13.8		44.7	52	2 12	14	3 58	26 88	24 23				
5	255	51.4	+20	11.2	189	39.4	+22	34.3	50	2 31	3 26	4 06	8 36 85	0 13 26				
6	270	51.3	+20	11.7	204	05.0	+22	23.7	45	3 05	3 50	4 25	8 57 79	** ** *				
7	285	51.3		12.2	218	30.8		13.1	40	30	4 09	40	9 13 75	** ** *				
8	300	51.2		12.7	232	56.7	+22	02.2	35	3 49	24	4 52	27 71	23 58 33				
9	315	51.2		13.2	247	22.7	+21	51.3	30	4 05	37	5 03	9 40 67	48 36				
10	330	51.2		13.7	261	48.9		40.3	20	30	4 58	22	10 00 62	30 42				
11	345	51.1	+20	14.2	276	15.3	+21	29.1	10 N	4 49	5 16	5 38	10 18 57	23 15 46				
12	0	51.1	+20	14.7	290	41.7	+21	17.8	0	5 05	5 31	5 53	10 35 53	23 01 50				
13	15	51.0		15.2	305	08.3	+21	06.4	10 S	20	5 46	6 08	10 51 49	22 46 55				
14	30	51.0		15.7	319	35.1	+20	54.9	20	33	6 00	24	11 09 44	30 60				
15	45	50.9		16.2	334	02.0		43.3	30	47	16	41	29 39	12 66				
16	60	50.9		16.7	348	29.0		31.5	35	5 54	25	6 52	41 36	22 02 68				
17	75	50.9	+20	17.2	2	56.1	+20	19.7	40	6 01	6 34	7 04	11 54 32	21 49 73				
18	90	50.8	+20	17.7	17	23.4	+20	07.8	45	6 09	6 45	7 18	12 10 28	21 35 77				
19	105	50.8		18.2	31	50.8	+19	55.7	50	18	6 58	35	30 21	17 83				
20	120	50.7		18.7	46	18.4		43.6	52	22	7 04	43	39 19	21 08 87				
21	135	50.7		19.2	60	46.0		31.4	54	26	11	7 51	12 49 16	20 59 89				
22	150	50.6		19.7	75	13.8		19.0	56	31	18	8 01	13 01 12	48 94				
23	165	50.6		20.2	89	41.8	+19	06.6	58	36	26	13	14 7	36 98				
24	180	50.5	+20	20.7	104	09.9	+18	54.1	60 S	6 41	7 35	8 26	13 29 2	20 21 104				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 04.1 ^m		Mag: -3.9 PMG: 14 ^h 16 ^m		Mag: +1.3 PMG: 10 ^h 04 ^m		Mag: -1.9 PMG: 15 ^h 39 ^m		Mag: +0.9 PMG: 8 ^h 49 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	238	39.2	146	04.6	+25	04.6	208	59.9	+11	19.8
1	253	41.7	161	03.8		04.6	224	00.6		20.5
2	268	44.1	176	02.9		04.6	239	01.2		21.1
3	283	46.6	191	02.1		04.7	254	01.9		21.8
4	298	49.0	206	01.3		04.7	269	02.6		22.5
5	313	51.5	221	00.4	+25	04.7	284	03.3	+11	23.2
6	328	54.0	235	59.6	+25	04.7	299	03.9	+11	23.8
7	343	56.4	250	58.8		04.7	314	04.6		24.5
8	358	58.9	265	58.0		04.7	329	05.3		25.2
9	14	01.4	280	57.1		04.7	344	06.0		25.8
10	29	03.8	295	56.3		04.8	359	06.6		26.5
11	44	06.3	310	55.5	+25	04.8	14	07.3	+11	27.2
12	59	08.8	325	54.6	+25	04.8	29	08.0	+11	27.8
13	74	11.2	340	53.8		04.8	44	08.7		28.5
14	89	13.7	355	53.0		04.8	59	09.3		29.2
15	104	16.2	10	52.2		04.8	74	10.0		29.8
16	119	18.6	25	51.3		04.8	89	10.7		30.5
17	134	21.1	40	50.5	+25	04.8	104	11.4	+11	31.2
18	149	23.5	55	49.7	+25	04.8	119	12.0	+11	31.8
19	164	26.0	70	48.8		04.8	134	12.7		32.5
20	179	28.5	85	48.0		04.8	149	13.4		33.2
21	194	30.9	100	47.2		04.8	164	14.1		33.8
22	209	33.4	115	46.4		04.8	179	14.7		34.5
23	224	35.9	130	45.5		04.8	194	15.4		35.2
24	239	38.3	145	44.7	+25	04.8	209	16.1	+11	35.8
Dif	—		-8		0		+7		+7	
							+20		-1	
									+22	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna							
	SD: 15'8 PMG:11 ^h 56.7 ^m				Edad: 5.2 ^d SD: 16'0 PMG: 17 ^h 40 ^m		PHE { 4 ^h : 58'7 12 ^h : 58'4 20 ^h : 58'1 R°: 48 ^m																			
	hG ☉		Dec		hG ☾		Dif		Dec				Dif		Civil			Náutico			Hora		R°		Hora	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m	h	m	m	
0	180	50.5	+20	20.7	104	09.9	+18	54.1	126	58	60 N	20	48	21	59	**	**	9	17	101	1	27	4			
1	195	50.5		21.2	118	38.1		41.5	127	58			32		33	**	**			28	96		15	8		
2	210	50.4		21.7	133	06.4		28.8	128	56			19	21	13	22	46		38	92		1	05	11		
3	225	50.4		22.2	147	34.9		16.0	128	54	20	08	20	56	22	10	47	88		0	55	15				
4	240	50.4		22.7	162	03.4	95	+18	03.2	52			19	58	42	21	45		9	54	85		47	18		
5	255	50.3	+20	23.2	176	32.1		+17	50.3	50			19	49	20	30	21	26		10	01	82		0	39	21
6	270	50.3	+20	23.7	191	01.0	99	+17	37.2	45			19	30	20	05	20	51		10	16	76		0	23	26
7	285	50.2		24.2	205	29.9	99		24.1	40			15		19	46	25	28		72	0	09	31			
8	300	50.2		24.7	219	59.0	101	+17	11.0	35			19	02		31	20	06		38	68	**	**	**		
9	315	50.1		25.2	234	28.2	102	+16	57.7	30			18	51	19	17	19	49		10	47	65	**	**	**	
10	330	50.1		25.6	248	57.5	103		44.4	20			32		18	56	24	11	02	59	**	**	**			
11	345	50.0	+20	26.1	263	27.0	105	+16	31.0	10 N	18	15	18	38	19	04	11	15	54	**	**	**				
12	0	50.0	+20	26.6	277	56.5	105	+16	17.5	0	18	00	18	22	18	48	11	28	49	23	51	48				
13	15	49.9		27.1	292	26.2	107	+16	04.0	10 S	17	45	18	08		33		40	45	41	52					
14	30	49.9		27.6	306	56.0	108	+15	50.4	20	29		17	53		20	11	53	40	30	57					
15	45	49.8		28.1	321	25.9	109		36.8	30	11		37		18	06	12	08	35	18	63					
16	60	49.8		28.6	335	55.9	110		23.0	35	17	01		28	17	59		17	31	10	67					
17	75	49.7	+20	29.1	350	26.1	112	+15	09.2	40	16	48	17	18	17	51	12	26	28	23	02	70				
18	90	49.7	+20	29.5	4	56.3	112	+14	55.4	45	16	34	17	07	17	43	12	38	23	22	52	75				
19	105	49.6		30.0	19	26.7	114		41.5	50		17	16	54		34		51	18	40	80					
20	120	49.6		30.5	33	57.1	114		27.5	52		09		48	30	12	58	15	35	82						
21	135	49.5		31.0	48	27.7	116	+14	13.5	54	16	00		41	25	13	05	13	28	86						
22	150	49.5		31.5	62	58.4	117	+13	59.5	56	15	50		34	21	13	9		22	89						
23	165	49.4		32.0	77	29.1	117		45.4	58		38		26	15	21	6		14	93						
24	180	49.4	+20	32.4	92	00.0	119	+13	31.2	60 S	15	25	16	16	17	10	13	31	2	22	05	97				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO											
	PMG 8 ^h 00.1 ^m		Mag: -3.9 PMG: 14 ^h 18 ^m				Mag: +1.3 PMG: 10 ^h 02 ^m				Mag: -1.9 PMG: 15 ^h 36 ^m				Mag: +0.9 PMG: 8 ^h 45 ^m											
	hG ♊		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	239	38.3	145	44.7	+25	04.8	209	16.1	+11	35.8	125	32.6	+22	00.1	228	20.2	+2	26.2								
1	254	40.8	160	43.9		04.8	224	16.8		36.5	140	34.6	+22	00.0	243	22.4		26.3								
2	269	43.3	175	43.1		04.8	239	17.4		37.1	155	36.6	+21	59.9	258	24.7		26.4								
3	284	45.7	190	42.2		04.7	254	18.1		37.8	170	38.6		59.9	273	26.9		26.5								
4	299	48.2	205	41.4		04.7	269	18.8		38.5	185	40.6		59.8	288	29.2		26.6								
5	314	50.6	220	40.6	+25	04.7	284	19.5	+11	39.1	200	42.5	+21	59.7	303	31.4	+2	26.7								
6	329	53.1	235	39.8	+25	04.7	299	20.1	+11	39.8	215	44.5	+21	59.7	318	33.6	+2	26.7								
7	344	55.6	250	38.9		04.7	314	20.8		40.5	230	46.5		59.6	333	35.9		26.8								
8	359	58.0	265	38.1		04.7	329	21.5		41.1	245	48.5		59.5	348	38.1		26.9								
9	15	00.5	280	37.3		04.7	344	22.2		41.8	260	50.5		59.4	3	40.4		27.0								
10	30	03.0	295	36.5		04.6	359	22.8		42.5	275	52.5		59.4	18	42.6		27.1								
11	45	05.4	310	35.6	+25	04.6	14	23.5	+11	43.1	290	54.5	+21	59.3	33	44.9	+2	27.2								
12	60	07.9	325	34.8	+25	04.6	29	24.2	+11	43.8	305	56.5	+21	59.2	48	47.1	+2	27.3								
13	75	10.4	340	34.0		04.6	44	24.8		44.4	320	58.5		59.2	63	49.3		27.3								
14	90	12.8	355	33.2		04.5	59	25.5		45.1	336	00.5		59.1	78	51.6		27.4								
15	105	15.3	10	32.3		04.5	74	26.2		45.8	351	02.5		59.0	93	53.8		27.5								
16	120	17.8	25	31.5		04.5	89	26.9		46.4	6	04.5		59.0	108	56.1		27.6								
17	135	20.2	40	30.7	+25	04.5	104	27.5	+11	47.1	21	06.5	+21	58.9	123	58.3	+2	27.7								
18	150	22.7	55	29.9	+25	04.4	119	28.2	+11	47.7	36	08.5	+21	58.8	139	00.6	+2	27.8								
19	165	25.1	70	29.0		04.4	134	28.9		48.4	51	10.5		58.7	154	02.8		27.9								
20	180	27.6	85	28.2		04.4	149	29.6		49.1	66	12.5		58.7	169	05.0		27.9								
21	195	30.1	100	27.4		04.3	164	30.2		49.7	81	14.5		58.6	184	07.3		28.0								
22	210	32.5	115	26.6		04.3	179	30.9		50.4	96	16.5		58.5	199	09.5		28.1								
23	225	35.0	130	25.7		04.3	194	31.6		51.0	111	18.4		58.5	214	11.8		28.2								
24	240	37.5	145	24.9	+25	04.2	209	32.2	+11	51.7	126	20.4	+21	58.4	229	14.0	+2	28.3								
Dif	—		-8		0		+7		+7		+20		-1		+22		+									

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG:11 ^h 56.8 ^m				Edad: 6.2 ^d SD: 15 ^h 8 PMG: 18 ^h 27 ^m														
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	180	49.4	+20	32.4	92	00.0	+13	31.2	120	17.0	142	60 N	** **	1 54	3 05	10 56	92	1 29	1
1	195	49.3		32.9	106	31.0			121			58	** **	2 20	21	11 03	88	22	4
2	210	49.3		33.4	121	02.1	+13	02.7	121			56	1 07	40	34	08 85	15	7	
3	225	49.2		33.9	135	33.2	+12	48.4	121			54	1 43	2 57	45	13 82	09	10	
4	240	49.2		34.4	150	04.5		34.1	123			52	2 08	3 11	3 55	18 79	1 03	13	
5	255	49.1	+20	34.8	164	35.9	+12	19.7	124			50	2 27	3 23	4 04	11 22	76	0 58	16
6	270	49.1	+20	35.3	179	07.4	+12	05.2	125			45	3 02	3 48	4 23	11 31	71	0 48	20
7	285	49.0		35.8	193	38.9	+11	50.8	125			40	28	4 07	38	38 67	39	24	
8	300	49.0		36.3	208	10.6		36.3	127			35	3 48	23	4 51	45 63	31	28	
9	315	48.9		36.7	222	42.3		21.7	127			30	4 04	36	5 02	11 50	60	24	31
10	330	48.8		37.2	237	14.2	+11	07.1	129			20	29	4 58	21	12 00	54	12	37
11	345	48.8	+20	37.7	251	46.1	+10	52.5	129			10 N	4 49	5 15	5 38	12 08	49	0 01	42
12	0	48.7	+20	38.2	266	18.1	+10	37.9	130			0	5 05	5 31	5 53	12 16	44	** ** *	**
13	15	48.7		38.6	280	50.2		23.2	131			10 S	20	5 46	6 08	24 40	** ** *	**	**
14	30	48.6		39.1	295	22.4	+10	08.5	132			20	34	6 01	24	32 35	** ** *	**	**
15	45	48.6		39.6	309	54.6	+9	53.8	132			30	48	17	43	41 30	** ** *	**	**
16	60	48.5		40.1	324	27.0		39.0	134			35	5 55	26	6 53	47 26	** ** *	**	**
17	75	48.5	+20	40.5	338	59.4	+9	24.2	134			40	6 03	6 36	7 05	12 53	23	** ** *	**
18	90	48.4	+20	41.0	353	31.9	+9	09.4	135			45	6 11	6 47	7 20	13 00	18	** ** *	**
19	105	48.4		41.5	8 04.4	135	+8	54.5	135			50	20	7 00	37	08 14	23 59	75	
20	120	48.3		41.9	22 37.1	137		39.7	137			52	24	06	45	12 11	56	77	
21	135	48.2		42.4	37 09.8	137		24.8	137			54	29	13	7 54	16 9	53	80	
22	150	48.2		42.9	51 42.6	138	+8	09.9	138			56	34	21	8 05	21 6	49	83	
23	165	48.1		43.3	66 15.5	139	+7	55.0	139			58	39	29	16	26 3	45	86	
24	180	48.1	+20	43.8	80 48.4	139	+7	40.0	150			60 S	6 44	7 38	8 30	13 32	0	23 41	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 56.2 ^m		Mag: -3.9 PMG: 14 ^h 19 ^m		Mag: +1.3 PMG: 10 ^h 01 ^m		Mag: -1.9 PMG: 15 ^h 33 ^m		Mag: +0.9 PMG: 8 ^h 42 ^m	
	hG ♂		hG ♀		hG ♂		hG ♀		hG ♀	
h	°	'	°	'	°	'	°	'	°	'
0	240	37.5	145	24.9	+25	04.2	209	32.2	+11	51.7
1	255	39.9	160	24.1		04.2	224	32.9		52.4
2	270	42.4	175	23.3		04.2	239	33.6		53.0
3	285	44.9	190	22.4		04.1	254	34.3		53.7
4	300	47.3	205	21.6		04.1	269	34.9		54.3
5	315	49.8	220	20.8	+25	04.0	284	35.6	+11	55.0
6	330	52.3	235	20.0	+25	04.0	299	36.3	+11	55.7
7	345	54.7	250	19.2		03.9	314	37.0		56.3
8	0	57.2	265	18.3		03.9	329	37.6		57.0
9	15	59.6	280	17.5		03.8	344	38.3		57.6
10	31	02.1	295	16.7		03.8	359	39.0		58.3
11	46	04.6	310	15.9	+25	03.7	14	39.6	+11	58.9
12	61	07.0	325	15.0	+25	03.7	29	40.3	+11	59.6
13	76	09.5	340	14.2		03.6	44	41.0	+12	00.3
14	91	12.0	355	13.4		03.6	59	41.7		00.9
15	106	14.4	10	12.6		03.5	74	42.3		01.6
16	121	16.9	25	11.8		03.5	89	43.0		02.2
17	136	19.4	40	10.9	+25	03.4	104	43.7	+12	02.9
18	151	21.8	55	10.1	+25	03.4	119	44.3	+12	03.5
19	166	24.3	70	09.3		03.3	134	45.0		04.2
20	181	26.7	85	08.5		03.2	149	45.7		04.8
21	196	29.2	100	07.7		03.2	164	46.4		05.5
22	211	31.7	115	06.8		03.1	179	47.0		06.2
23	226	34.1	130	06.0		03.0	194	47.7		06.8
24	241	36.6	145	05.2	+25	03.0	209	48.4	+12	07.5
Dif	—		-8		-1		+7		+7	
								+20		-1
									+22	+1

UT	SOL		LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'8 PMG: 11 ^h 56.8 ^m		Edad: 7.2 ^d SD: 15'6 PMG: 19 ^h 11 ^m		PHE { 4 ^h : 57'0 12 ^h : 56'7 20 ^h : 56'5 R°: 43 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m			
0	180	48.1	+20	43.8	80	48.4	+7	40.0	60 N	20 52	22 06	** **	12 28	90	1 30	1		
1	195	48.0		44.3	95	21.4	140	25.1	58	36	21 38	** **	31	86	26	4		
2	210	48.0		44.7	109	54.5	141	+7	10.1	56	23	17	22 55	33	83	22	8	
3	225	47.9		45.2	124	27.6	141	+6	55.1	54	11	21 00	22 16	35	80	19	10	
4	240	47.8		45.7	139	00.8	142		40.1	52	20 00	20 45	21 50	37	77	16	13	
5	255	47.8	+20	46.1	153	34.1	143	+6	25.1	50	19 51	20 33	21 30	12 38	75	1 14	14	
6	270	47.7	+20	46.6	168	07.4	143	+6	10.1	45	19 32	20 08	20 53	12 42	70	1 08	19	
7	285	47.7		47.1	182	40.8	144	+5	55.1	40	16	19 48	27	45	66	1 03	23	
8	300	47.6		47.5	197	14.2	144		40.0	35	19 03	32	20 07	48	61	0 59	27	
9	315	47.6		48.0	211	47.7	145		25.0	30	18 52	19 19	19 51	50	59	55	30	
10	330	47.5		48.4	226	21.2	145	+5	09.9	20	33	18 57	25	54	53	49	35	
11	345	47.4	+20	48.9	240	54.8	146	+4	54.9	10 N	18 16	18 39	19 05	12 57	48	0 43	40	
12	0	47.4	+20	49.4	255	28.5	147	+4	39.8	0	18 00	18 23	18 48	13 00	44	0 37	45	
13	15	47.3		49.8	270	02.2	147		24.7	10 S	17 45	18 07	33	04	39	32	49	
14	30	47.3		50.3	284	36.0	148	+4	09.7	20	29	17 52	19	07	35	26	54	
15	45	47.2		50.7	299	09.8	148	+3	54.6	30	17 10	36	18 05	11	29	19	60	
16	60	47.1		51.2	313	43.6	148		39.5	35	16 59	27	17 58	13	26	15	63	
17	75	47.1	+20	51.6	328	17.5	149	+3	24.4	40	16 47	17 17	17 50	13 16	22	0 11	66	
18	90	47.0	+20	52.1	342	51.5	150	+3	09.4	45	16 33	17 05	17 42	13 18	19	0 05	71	
19	105	47.0		52.5	357	25.5	150	+2	54.3	50	15	16 52	32	22	14	** **	**	
20	120	46.9		53.0	11	59.5	150		39.2	52	16 07	46	28	23	12	** **	**	
21	135	46.8		53.5	26	33.5	150		24.2	54	15 57	39	23	25	10	** **	**	
22	150	46.8		53.9	41	07.7	152	+2	09.1	56	47	31	18	27	7	** **	**	
23	165	46.7		54.4	55	41.8	151	+1	54.1	58	35	23	13	29	4	** **	**	
24	180	46.7	+20	54.8	70	16.0	152	+1	39.0	60 S	15 21	16 13	17 07	13 32	0	** **	**	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 7 ^h 52.3 ^m		Mag: -3.9 PMG: 14 ^h 20 ^m			Mag: +1.3 PMG: 10 ^h 00 ^m			Mag: -1.9 PMG: 15 ^h 29 ^m			Mag: +0.9 PMG: 8 ^h 38 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	241	36.6	145	05.2	+25	03.0	209	48.4	+12	07.5	127	08.2	+21	56.7	230	07.9	+2	30.3
1	256	39.1	160	04.4		02.9	224	49.0		08.1	142	10.2		56.6	245	10.2		30.4
2	271	41.5	175	03.6		02.8	239	49.7		08.8	157	12.2		56.5	260	12.4		30.5
3	286	44.0	190	02.8		02.8	254	50.4		09.4	172	14.2		56.5	275	14.6		30.5
4	301	46.5	205	01.9		02.7	269	51.1		10.1	187	16.2		56.4	290	16.9		30.6
5	316	48.9	220	01.1	+25	02.6	284	51.7	+12	10.7	202	18.2	+21	56.3	305	19.1	+2	30.7
6	331	51.4	235	00.3	+25	02.6	299	52.4	+12	11.4	217	20.2	+21	56.3	320	21.4	+2	30.8
7	346	53.9	249	59.5		02.5	314	53.1		12.0	232	22.1		56.2	335	23.6		30.9
8	1	56.3	264	58.7		02.4	329	53.7		12.7	247	24.1		56.1	350	25.9		31.0
9	16	58.8	279	57.8		02.3	344	54.4		13.3	262	26.1		56.0	5	28.1		31.0
10	32	01.2	294	57.0		02.2	359	55.1		14.0	277	28.1		56.0	20	30.4		31.1
11	47	03.7	309	56.2	+25	02.2	14	55.8	+12	14.6	292	30.1	+21	55.9	35	32.6	+2	31.2
12	62	06.2	324	55.4	+25	02.1	29	56.4	+12	15.3	307	32.1	+21	55.8	50	34.9	+2	31.3
13	77	08.6	339	54.6		02.0	44	57.1		15.9	322	34.1		55.7	65	37.1		31.4
14	92	11.1	354	53.8		01.9	59	57.8		16.6	337	36.1		55.7	80	39.4		31.5
15	107	13.6	9	52.9		01.8	74	58.4		17.2	352	38.0		55.6	95	41.6		31.5
16	122	16.0	24	52.1		01.7	89	59.1		17.9	7	40.0		55.5	110	43.9		31.6
17	137	18.5	39	51.3	+25	01.7	104	59.8	+12	18.5	22	42.0	+21	55.5	125	46.1	+2	31.7
18	152	21.0	54	50.5	+25	01.6	120	00.5	+12	19.2	37	44.0	+21	55.4	140	48.4	+2	31.8
19	167	23.4	69	49.7		01.5	135	01.1		19.8	52	46.0		55.3	155	50.6		31.9
20	182	25.9	84	48.9		01.4	150	01.8		20.5	67	48.0		55.2	170	52.9		32.0
21	197	28.4	99	48.1		01.3	165	02.5		21.1	82	50.0		55.2	185	55.1		32.0
22	212	30.8	114	47.2		01.2	180	03.1		21.8	97	52.0		55.1	200	57.4		32.1
23	227	33.3	129	46.4		01.1	195	03.8		22.4	112	53.9		55.0	215	59.6		32.2
24	242	35.7	144	45.6	+25	01.0	210	04.5	+12	23.1	127	55.9	+21	54.9	231	01.8	+2	32.3
Dif	—		-8		-1		+7		+7		+20		-1		+22		+1	

UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG:11 ^h 56.9 ^m			Edad: 8.2 ^d PHE { 4 ^h : 56 ^h /3 12 ^h : 56 ^h /0 20 ^h : 55 ^h /8 PMG: 19 ^h 53 ^m R°: 42 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	180	46.7	+20	54.8	70	16.0	+1	39.0	60 N	** **	1 47	3 01	13 56	87	1 29	0		
1	195	46.6		55.3	84	50.2		24.0	58	** **	2 15	17	55	83	29	3		
2	210	46.5		55.7	99	24.4	+1	09.0	56	0 58	36	31	54	80	28	6		
3	225	46.5		56.2	113	58.7	+0	54.0	54	1 38	2 54	43	53	77	28	8		
4	240	46.4		56.6	128	33.0		39.0	52	2 04	3 08	3 53	53	74	27	11		
5	255	46.4	+20	57.1	143	07.4	+0	24.0	50	2 24	3 21	4 02	13 52	72	1 27	12		
6	270	46.3	+20	57.5	157	41.8	+0	09.0	45	3 00	3 46	4 21	13 50	67	1 26	17		
7	285	46.2		58.0	172	16.1	-0	05.9	40	26	4 05	37	49	63	25	21		
8	300	46.2		58.4	186	50.6		20.9	35	3 46	21	4 50	48	59	24	25		
9	315	46.1		58.8	201	25.0		35.8	30	4 03	35	5 02	47	56	24	27		
10	330	46.0		59.3	215	59.5	-0	50.7	20	29	4 57	21	45	51	23	33		
11	345	46.0	+20	59.7	230	34.0	-1	05.6	10 N	4 49	5 15	5 38	13 44	46	1 22	37		
12	0	45.9	+21	00.2	245	08.5	-1	20.5	0	5 05	5 31	5 53	13 43	42	1 21	42		
13	15	45.8		00.6	259	43.0		35.4	10 S	20	5 46	6 09	42	37	20	46		
14	30	45.8		01.1	274	17.6	-1	50.2	20	35	6 02	25	40	33	19	51		
15	45	45.7		01.5	288	52.2	-2	05.0	30	49	18	44	39	27	18	56		
16	60	45.7		01.9	303	26.7		19.8	35	5 56	27	6 55	38	24	17	60		
17	75	45.6	+21	02.4	318	01.3	-2	34.6	40	6 04	6 37	7 07	13 37	21	1 16	63		
18	90	45.5	+21	02.8	332	36.0	-2	49.4	45	6 13	6 49	7 22	13 36	17	1 15	68		
19	105	45.5		03.3	347	10.6	-3	04.1	50	22	7 03	39	35	12	14	73		
20	120	45.4		03.7	1	45.2		18.8	52	26	09	48	34	10	13	75		
21	135	45.3		04.1	16	19.9		33.5	54	31	16	7 57	33	8	13	77		
22	150	45.3		04.6	30	54.5	-3	48.1	56	36	23	8 08	33	5	12	80		
23	165	45.2		05.0	45	29.2	-4	02.8	58	41	32	20	32	3	11	84		
24	180	45.1	+21	05.5	60	03.8	-4	17.4	60 S	6 47	7 41	8 34	13 31	0	1 11	87		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 7 ^h 48.3 ^m			Mag: -3.9 PMG: 14 ^h 22 ^m			Mag: +1.4 PMG: 9 ^h 59 ^m			Mag: -1.9 PMG: 15 ^h 26 ^m			Mag: +0.9 PMG: 8 ^h 35 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°			
0	242	35.7	144	45.6	+25	01.0	210	04.5	+12	23.1	127	55.9	+21	54.9	231	01.8	+2	32.3
1	257	38.2	159	44.8		00.9	225	05.1		23.7	142	57.9		54.9	246	04.1		32.4
2	272	40.7	174	44.0		00.8	240	05.8		24.4	157	59.9		54.8	261	06.3		32.4
3	287	43.1	189	43.2		00.7	255	06.5		25.0	173	01.9		54.7	276	08.6		32.5
4	302	45.6	204	42.4		00.6	270	07.2		25.7	188	03.9		54.7	291	10.8		32.6
5	317	48.1	219	41.5	+25	00.5	285	07.8	+12	26.3	203	05.9	+21	54.6	306	13.1	+2	32.7
6	332	50.5	234	40.7	+25	00.4	300	08.5	+12	27.0	218	07.8	+21	54.5	321	15.3	+2	32.8
7	347	53.0	249	39.9		00.3	315	09.2		27.6	233	09.8		54.4	336	17.6		32.9
8	2	55.5	264	39.1		00.2	330	09.8		28.3	248	11.8		54.4	351	19.8		32.9
9	17	57.9	279	38.3	+25	00.1	345	10.5		28.9	263	13.8		54.3	6	22.1		33.0
10	33	00.4	294	37.5	+25	00.0	0	11.2		29.6	278	15.8		54.2	21	24.3		33.1
11	48	02.8	309	36.7	+24	59.9	15	11.8	+12	30.2	293	17.8	+21	54.1	36	26.6	+2	33.2
12	63	05.3	324	35.9	+24	59.8	30	12.5	+12	30.8	308	19.7	+21	54.1	51	28.8	+2	33.3
13	78	07.8	339	35.1		59.7	45	13.2		31.5	323	21.7		54.0	66	31.1		33.3
14	93	10.2	354	34.2		59.5	60	13.8		32.1	338	23.7		53.9	81	33.3		33.4
15	108	12.7	9	33.4		59.4	75	14.5		32.8	353	25.7		53.9	96	35.6		33.5
16	123	15.2	24	32.6		59.3	90	15.2		33.4	8	27.7		53.8	111	37.8		33.6
17	138	17.6	39	31.8	+24	59.2	105	15.9	+12	34.1	23	29.7	+21	53.7	126	40.1	+2	33.7
18	153	20.1	54	31.0	+24	59.1	120	16.5	+12	34.7	38	31.6	+21	53.6	141	42.3	+2	33.8
19	168	22.6	69	30.2		59.0	135	17.2		35.4	53	33.6		53.6	156	44.6		33.8
20	183	25.0	84	29.4		58.8	150	17.9		36.0	68	35.6		53.5	171	46.8		33.9
21	198	27.5	99	28.6		58.7	165	18.5		36.6	83	37.6		53.4	186	49.1		34.0
22	213	30.0	114	27.8		58.6	180	19.2		37.3	98	39.6		53.3	201	51.3		34.1
23	228	32.4	129	27.0		58.5	195	19.9		37.9	113	41.6		53.3	216	53.6		34.2
24	243	34.9	144	26.1	+24	58.3	210	20.5	+12	38.6	128	43.5	+21	53.2	231	55.8	+2	34.2
Dif	—		-8		-1		+7		+6		+20		-1		+22		+	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna																	
	SD: 15 ^h 8 PMG: 11 ^h 57.0 ^m				Edad: 9.2 ^d SD: 15 ^h 2 PMG: 20 ^h 35 ^m																															
					PHE { 4 ^h : 55/6 12 ^h : 55/4 20 ^h : 55/3 R°: 43 ^m																															
	hG ☉		Dec		hG ☾		Dif		Dec		Dif				Civil	Náutico	Hora	R°	Hora	R°																
h	°	'	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m																
0	180	45.1	+21	05.5	60	03.8		-4	17.4		145	60 N	20 56	22 13	** **		15 23	88	1 29	1																
1	195	45.1		05.9	74	38.5	157		31.9		145	58	40	21 43	** **		18 85		32	4																
2	210	45.0		06.3	89	13.2	157	-4	46.5		146	56	26	21	23 06		14 81		34	7																
3	225	44.9		06.8	103	47.9	157	-5	01.0		145	54	14	21 03	22 22		10 78		36	10																
4	240	44.9		07.2	118	22.5	156		15.5		145	52	20 03	20 48	21 54		07 75		38	12																
5	255	44.8	+21	07.6	132	57.2	157	-5	29.9		144	50	19 54	20 36	21 34		15 04	73	1 39	15																
6	270	44.7	+21	08.1	147	31.9	157	-5	44.3		144	45	19 34	20 10	20 56		14 57	68	1 43	19																
7	285	44.7		08.5	162	06.6	157	-5	58.7		144	40	18	19 50	30		52 64		46	23																
8	300	44.6		08.9	176	41.3	157	-6	13.0		143	35	19 05	34	20 09		47 61		49	26																
9	315	44.5		09.4	191	15.9	156		27.4		144	30	18 53	19 20	19 52		43 58		51	30																
10	330	44.5		09.8	205	50.6	157		41.6		142	20	33	18 58	26		36 53		56	34																
11	345	44.4	+21	10.2	220	25.3	157	-6	55.9		143	10 N	18 16	18 39	19 06		14 30	48	1 59	39																
12	0	44.3	+21	10.6	234	59.9	156	-7	10.1		142	0	18 01	18 23	18 49		14 25	43	2 03	43																
13	15	44.2		11.1	249	34.6	157		24.2		141	10 S	17 45	18 07	33		19 39		06	48																
14	30	44.2		11.5	264	09.2	156		38.3		141	20	28	17 52	19		13 35		10	52																
15	45	44.1		11.9	278	43.8	156	-7	52.4		141	30	17 09	35	18 05		06 30		14	58																
16	60	44.0		12.4	293	18.4	156	-8	06.5		141	35	16 59	26	17 57		14 02	27	17	60																
17	75	44.0	+21	12.8	307	53.0	156	-8	20.5		140	40	16 46	17 16	17 49		13 58	24	2 19	65																
18	90	43.9	+21	13.2	322	27.6	156	-8	34.4		139	45	16 31	17 04	17 40		13 53	20	2 23	68																
19	105	43.8		13.6	337	02.2	156	-8	48.3		139	50	13	16 50	31		47 15		27	73																
20	120	43.8		14.0	351	36.7	155	-9	02.2		139	52	16 05	44	26		44 13		28	76																
21	135	43.7		14.5	6	11.3	156		16.0		138	54	15 55	37	21		41 11		30	78																
22	150	43.6		14.9	20	45.8	155		29.8		138	56	44	29	16		38 8		32	81																
23	165	43.5		15.3	35	20.3	155		43.5		137	58	32	20	11		35 4		35	84																
24	180	43.5	+21	15.7	49	54.8	155	-9	57.2		137	60 S	15 18	16 11	17 05		13 31	1	2 38	88																
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO																			
	PMG 7 ^h 44.4 ^m				Mag: -3.9 PMG: 14 ^h 23 ^m				Mag: +1.4 PMG: 9 ^h 58 ^m				Mag: -1.9 PMG: 15 ^h 23 ^m				Mag: +0.9 PMG: 8 ^h 31 ^m																			
	hG ♈				hG ♀				hG ♂				hG ♃				hG ♄																			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'																
0	243	34.9	144	26.1	+24	58.3	210	20.5	+12	38.6	128	43.5	+21	53.2	231	55.8	+2	34.2																		
1	258	37.3	159	25.3		58.2	225	21.2		39.2	143	45.5		53.1	246	58.1		34.3																		
2	273	39.8	174	24.5		58.1	240	21.9		39.9	158	47.5		53.0	262	00.3		34.4																		
3	288	42.3	189	23.7		58.0	255	22.5		40.5	173	49.5		53.0	277	02.6		34.5																		
4	303	44.7	204	22.9		57.8	270	23.2		41.1	188	51.5		52.9	292	04.9		34.6																		
5	318	47.2	219	22.1	+24	57.7	285	23.9	+12	41.8	203	53.5	+21	52.8	307	07.1	+2	34.6																		
6	333	49.7	234	21.3	+24	57.6	300	24.5	+12	42.4	218	55.4	+21	52.7	322	09.4	+2	34.7																		
7	348	52.1	249	20.5		57.4	315	25.2		43.1	233	57.4		52.7	337	11.6		34.8																		
8	3	54.6	264	19.7		57.3	330	25.9		43.7	248	59.4		52.6	352	13.9		34.9																		
9	18	57.1	279	18.9		57.2	345	26.5		44.3	264	01.4		52.5	7	16.1		35.0																		
10	33	59.5	294	18.1		57.0	0	27.2		45.0	279	03.4		52.4	22	18.4		35.1																		
11	49	02.0	309	17.3	+24	56.9	15	27.9	+12	45.6	294	05.3	+21	52.4	37	20.6	+2	35.1																		
12	64	04.4	324	16.5	+24	56.8	30	28.6	+12	46.3	309	07.3	+21	52.3	52	22.9	+2	35.2																		
13	79	06.9	339	15.7		56.6	45	29.2		46.9	324	09.3		52.2	67	25.1		35.3																		
14	94	09.4	354	14.9		56.5	60	29.9		47.5	339	11.3		52.1	82	27.4		35.4																		
15	109	11.8	9	14.1		56.3	75	30.6		48.2	354	13.3		52.1	97	29.6		35.5																		
16	124	14.3	24	13.3		56.2	90	31.2		48.8	9	15.2		52.0	112	31.9		35.5																		
17	139	16.8	39	12.4	+24	56.0	105	31.9	+12	49.5	24	17.2	+21	51.9	127	34.1	+2	35.6																		
18	154	19.2	54	11.6	+24	55.9	120	32.6	+12	50.1	39	19.2	+21	51.8	142	36.4	+2	35.7																		
19	169	21.7	69	10.8		55.7	135	33.2		50.7	54	21.2		51.8	157	38.6		35.8																		
20	184	24.2	84	10.0		55.6	150	33.9		51.4	69	23.2		51.7	172	40.9		35.9																		
21	199	26.6	99	09.2		55.4	165	34.6		52.0	84	25.1		51.6	187	43.1		35.9																		
22	214	29.1	114	08.4		55.3	180	35.2		52.7	99	27.1		51.5	202	45.4		36.0																		
23	229	31.6	129	07.6		55.1	195	35.9		53.3	114	29.1		51.5	217	47.6		36.1																		
24	244	34.0	144	06.8	+24	55.0	210	36.6	+12	53.9	129	31.1	+21	51.4	232	49.9	+2	36.2																		
Dif	—				-8				-1				+7				+6				+20				-1				+23				+1			

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG:11 ^h 57.2 ^m			Edad: 10.2 ^d PHE { 4 ^h : 55'1 12 ^h : 55'0 20 ^h : 54'8 R°: 44 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	43.5	+21	15.7	49	54.8	-9	57.2	60 N	** **	1 41	2 57	16 50	89	1 29	0	
1	195	43.4		16.2	64	29.2	-10	10.8	58	** **	2 11	3 14	41 85	35	3	3	
2	210	43.3		16.6	79	03.7		24.4	56	0 47	33	28	34 80	40	7		
3	225	43.3		17.0	93	38.1		38.0	54	1 32	2 51	40	27 77	44	10		
4	240	43.2		17.4	108	12.5	-10	51.4	52	1 59	3 05	3 51	21 75	49	12		
5	255	43.1	+21	17.8	122	46.9	-11	04.9	50	2 20	3 18	4 00	16 16	72	1 52	15	
6	270	43.0	+21	18.2	137	21.2	-11	18.3	45	2 58	3 44	4 20	16 04	67	2 01	19	
7	285	43.0		18.7	151	55.5		31.6	40	3 24	4 04	36	15 55	62	08	23	
8	300	42.9		19.1	166	29.8		44.9	35	3 45	20	4 49	46 60	14	27		
9	315	42.8		19.5	181	04.1	-11	58.1	30	4 02	34	5 01	39 57	19	30		
10	330	42.8		19.9	195	38.3	-12	11.3	20	28	4 57	21	27 52	29	34		
11	345	42.7	+21	20.3	210	12.5	-12	24.4	10 N	4 48	5 15	5 38	15 17	47	2 37	39	
12	0	42.6	+21	20.7	224	46.7	-12	37.4	0	5 06	5 31	5 54	15 07	43	2 45	42	
13	15	42.5		21.2	239	20.8	-12	50.4	10 S	21	5 47	6 09	14 57	40	2 52	47	
14	30	42.5		21.6	253	54.9	-13	03.4	20	35	6 02	26	46 36	3 01	51		
15	45	42.4		22.0	268	29.0		16.2	30	50	19	45	35 30	10	57		
16	60	42.3		22.4	283	03.0		29.1	35	5 57	28	6 56	28 28	16	59		
17	75	42.2	+21	22.8	297	37.0	-13	41.8	40	6 05	6 39	7 09	14 20	25	3 22	63	
18	90	42.2	+21	23.2	312	11.0	-13	54.5	45	6 14	6 51	7 24	14 11	21	3 29	67	
19	105	42.1		23.6	326	44.9	-14	07.2	50	24	7 05	42	14 01	16	38	72	
20	120	42.0		24.0	341	18.8		19.7	52	29	11	7 50	13 56	14	42	75	
21	135	41.9		24.4	355	52.7		32.2	54	33	18	8 00	51 11	47	77		
22	150	41.9		24.8	10	26.5		44.7	56	38	26	11	45 8	52	80		
23	165	41.8		25.2	25	00.2	-14	57.1	58	44	35	23	38 5	3 58	83		
24	180	41.7	+21	25.6	39	34.0	-15	09.4	60 S	6 50	7 44	8 38	13 30	1	4 04	88	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 7 ^h 40.5 ^m		Mag: -3.9 PMG: 14 ^h 24 ^m		Mag: +1.4 PMG: 9 ^h 57 ^m		Mag: -1.9 PMG: 15 ^h 20 ^m		Mag: +0.9 PMG: 8 ^h 27 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	244	34.0	144	06.8	+24	55.0	210	36.6	+12	53.9							
1	259	36.5	159	06.0		54.8	225	37.2		54.6							
2	274	38.9	174	05.2		54.7	240	37.9		55.2							
3	289	41.4	189	04.4		54.5	255	38.6		55.8							
4	304	43.9	204	03.6		54.3	270	39.2		56.5							
5	319	46.3	219	02.8	+24	54.2	285	39.9	+12	57.1							
6	334	48.8	234	02.0	+24	54.0	300	40.6	+12	57.7							
7	349	51.3	249	01.2		53.9	315	41.2		58.4							
8	4	53.7	264	00.4		53.7	330	41.9		59.0							
9	19	56.2	278	59.6		53.5	345	42.6	+12	59.7							
10	34	58.7	293	58.8		53.4	0	43.2	+13	00.3							
11	50	01.1	308	58.0	+24	53.2	15	43.9	+13	00.9							
12	65	03.6	323	57.2	+24	53.0	30	44.6	+13	01.6							
13	80	06.1	338	56.4		52.9	45	45.2		02.2							
14	95	08.5	353	55.6		52.7	60	45.9		02.8							
15	110	11.0	8	54.8		52.5	75	46.6		03.5							
16	125	13.4	23	54.0		52.3	90	47.2		04.1							
17	140	15.9	38	53.2	+24	52.2	105	47.9	+13	04.7							
18	155	18.4	53	52.4	+24	52.0	120	48.6	+13	05.4							
19	170	20.8	68	51.6		51.8	135	49.2		06.0							
20	185	23.3	83	50.8		51.6	150	49.9		06.6							
21	200	25.8	98	50.0		51.5	165	50.6		07.3							
22	215	28.2	113	49.3		51.3	180	51.2		07.9							
23	230	30.7	128	48.5		51.1	195	51.9		08.5							
24	245	33.2	143	47.7	+24	50.9	210	52.5	+13	09.2							
Dif	—		-8		-2		+7		+6								
							+20		-1								
									+23								
									+1								

UT	SOL		LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 57.3 ^m		Edad: 11.2 ^d PHE { 4 ^h : 54 ^h /7 12 ^h : 54 ^h /6 20 ^h : 54 ^h /5 PMG: 22 ^h 01 ^m R°: 48 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	° /	° /	° /		° /		°	h m	h m	h m		h m m		h m m		
0	180 41.7	+21 25.6	39 34.0		-15 09.4		60 N	21 00	22 19	** **		18 19 93		1 29 3		
1	195 41.6	26.1	54 07.7	147	21.6	122	58	20 43	21 48	** **		18 06 87		38 8		
2	210 41.6	26.5	68 41.3	146	33.8	121	56	29	25	23 19		17 54 83		47 11		
3	225 41.5	26.9	83 14.9	146	45.9	120	54	16	21 07	22 28		44 79		1 54 14		
4	240 41.4	27.3	97 48.5	146	-15 57.9	120	52	20 06	20 51	21 59		36 76		2 01 17		
5	255 41.3	+21 27.7	112 22.0	145	-16 09.9	120	50	19 56	20 38	21 37		17 28 73		2 07 19		
6	270 41.2	+21 28.1	126 55.5	145	-16 21.8	119	45	19 36	20 12	20 59		17 11 68		2 20 24		
7	285 41.2	28.5	141 28.9	144	33.6	118	40	20	19 52	32		16 57 65		31 28		
8	300 41.1	28.9	156 02.3	144	45.4	118	35	19 06	35	20 11		46 61		41 30		
9	315 41.0	29.3	170 35.6	143	-16 57.1	117	30	18 54	19 21	19 54		36 59		2 49 33		
10	330 40.9	29.7	185 08.9	143	-17 08.7	116	20	34	18 58	27		19 54		3 03 38		
11	345 40.9	+21 30.1	199 42.2	143	-17 20.2	115	10 N	18 17	18 40	19 06		16 04 51		3 16 42		
12	0 40.8	+21 30.5	214 15.4	142	-17 31.6	114	0	18 01	18 23	18 49		15 50 47		3 27 46		
13	15 40.7	30.9	228 48.5	141	43.0	114	10 S	17 45	18 08	34		37 43		39 50		
14	30 40.6	31.3	243 21.6	141	-17 54.3	113	20	28	17 52	19		22 40		3 52 54		
15	45 40.5	31.7	257 54.7	141	-18 05.5	112	30	17 09	35	18 04		15 05 36		4 07 58		
16	60 40.5	32.1	272 27.7	140	16.7	112	35	16 58	25	17 56		14 56 33		15 61		
17	75 40.4	+21 32.4	287 00.6	139	-18 27.7	110	40	16 45	17 15	17 48		14 45 30		4 25 64		
18	90 40.3	+21 32.8	301 33.5	139	-18 38.7	110	45	16 30	17 03	17 39		14 32 26		4 36 69		
19	105 40.2	33.2	316 06.3	138	-18 49.6	109	50	11	16 49	29		17 21		50 74		
20	120 40.1	33.6	330 39.1	138	-19 00.4	108	52	16 03	42	25		10 19		4 57 76		
21	135 40.1	34.0	345 11.9	138	11.1	107	54	15 53	35	20		14 02 16		5 04 79		
22	150 40.0	34.4	359 44.6	137	21.8	107	56	42	27	15		13 53 13		12 83		
23	165 39.9	34.8	14 17.2	136	32.3	105	58	29	18	09		43 9		21 87		
24	180 39.8	+21 35.2	28 49.8	136	-19 42.8	105	60 S	15 15	16 08	17 03		13 31 4		5 32 92		
UT	ARIES PMG 7 ^h 36.5 ^m		VENUS Mag: -3.9 PMG: 14 ^h 26 ^m		MARTE Mag: +1.4 PMG: 9 ^h 56 ^m		JÚPITER Mag: -1.9 PMG: 15 ^h 17 ^m		SATURNO Mag: +0.9 PMG: 8 ^h 24 ^m							
	hG ♈	hG ♀	Dec		hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	° /	° /	° /		° /	° /	° /		° /	° /	° /		° /		° /	
0	245 33.2	143 47.7	+24 50.9		210 52.5	+13 09.2	130 18.5	+21 49.6	233 44.0	+2 38.1						
1	260 35.6	158 46.9	50.7		225 53.2	09.8	145 20.5	49.5	248 46.3	38.2						
2	275 38.1	173 46.1	50.5		240 53.9	10.4	160 22.5	49.4	263 48.5	38.2						
3	290 40.5	188 45.3	50.3		255 54.5	11.0	175 24.5	49.4	278 50.8	38.3						
4	305 43.0	203 44.5	50.2		270 55.2	11.7	190 26.4	49.3	293 53.0	38.4						
5	320 45.5	218 43.7	+24 50.0		285 55.9	+13 12.3	205 28.4	+21 49.2	308 55.3	+2 38.5						
6	335 47.9	233 42.9	+24 49.8		300 56.5	+13 12.9	220 30.4	+21 49.1	323 57.6	+2 38.6						
7	350 50.4	248 42.1	49.6		315 57.2	13.6	235 32.4	49.1	338 59.8	38.6						
8	5 52.9	263 41.3	49.4		330 57.9	14.2	250 34.4	49.0	354 02.1	38.7						
9	20 55.3	278 40.5	49.2		345 58.5	14.8	265 36.3	48.9	9 04.3	38.8						
10	35 57.8	293 39.7	49.0		0 59.2	15.5	280 38.3	48.8	24 06.6	38.9						
11	51 00.3	308 38.9	+24 48.8		15 59.9	+13 16.1	295 40.3	+21 48.7	39 08.8	+2 38.9						
12	66 02.7	323 38.1	+24 48.6		31 00.5	+13 16.7	310 42.2	+21 48.7	54 11.1	+2 39.0						
13	81 05.2	338 37.4	48.4		46 01.2	17.3	325 44.2	48.6	69 13.4	39.1						
14	96 07.7	353 36.6	48.2		61 01.9	18.0	340 46.2	48.5	84 15.6	39.2						
15	111 10.1	8 35.8	48.0		76 02.5	18.6	355 48.2	48.4	99 17.9	39.3						
16	126 12.6	23 35.0	47.8		91 03.2	19.2	10 50.1	48.4	114 20.1	39.3						
17	141 15.0	38 34.2	+24 47.6		106 03.9	+13 19.8	25 52.1	+21 48.3	129 22.4	+2 39.4						
18	156 17.5	53 33.4	+24 47.4		121 04.5	+13 20.5	40 54.1	+21 48.2	144 24.6	+2 39.5						
19	171 20.0	68 32.6	47.2		136 05.2	21.1	55 56.1	48.1	159 26.9	39.6						
20	186 22.4	83 31.8	47.0		151 05.8	21.7	70 58.0	48.1	174 29.2	39.6						
21	201 24.9	98 31.0	46.8		166 06.5	22.4	86 00.0	48.0	189 31.4	39.7						
22	216 27.4	113 30.2	46.6		181 07.2	23.0	101 02.0	47.9	204 33.7	39.8						
23	231 29.8	128 29.5	46.3		196 07.8	23.6	116 04.0	47.8	219 35.9	39.9						
24	246 32.3	143 28.7	+24 46.1		211 08.5	+13 24.2	131 05.9	+21 47.7	234 38.2	+2 40.0						
Dif	—	-8	-2		+7	+6	+20	-1	+23	+						

UT	SOL		☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 57.4 ^m		Edad: 12.2 ^d PHE { 4 ^h : 54.4 12 ^h : 54.3 20 ^h : 54.2 PMG: 22 ^h 47 ^m R°: 49 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°	
h	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m m	h m m	h m m		
0	180 39.8	+21 35.2	28 49.8		-19 42.8		60 N	** **	1 35	2 54	19 50 92	1 30 4			
1	195 39.7		43 22.3	135	-19 53.2	104	58	** **	2 06	3 11	31 84	44 10			
2	210 39.7		57 54.8	135	-20 03.5	103	56		0 35	29	15 79	1 56 14			
3	225 39.6		72 27.2	134		13.7	54		1 27	2 48	38	19 02 75	2 07 17		
4	240 39.5		86 59.5	133		23.8	52		1 56	3 03	49	18 50 72	16 21		
5	255 39.4	+21 37.1	101 31.8	133	-20 33.8	100	50		2 17	3 16	3 58	18 40 70	2 25 22		
6	270 39.3	+21 37.5	116 04.1	133	-20 43.8	100	45		2 56	3 42	4 18	18 18 65	2 43 27		
7	285 39.3		130 36.3	132	-20 53.6	98	40		3 23	4 03	35	18 01 62	2 58 31		
8	300 39.2		145 08.4	131	-21 03.4	98	35		3 44	19	4 48	17 46 59	3 10 34		
9	315 39.1		159 40.5	131		13.0	30		4 01	33	5 00	33 58	21 36		
10	330 39.0		174 12.5	130		22.6	20		27	4 56	20	17 12 54	40 40		
11	345 38.9	+21 39.4	188 44.5	130	-21 32.1	95	10 N		4 48	5 15	5 38	16 53 51	3 56 44		
12	0 38.8	+21 39.8	203 16.4	129	-21 41.5	94	0		5 06	5 32	5 54	16 36 48	4 12 47		
13	15 38.8		217 48.3	129		50.7	10 S		21	5 47	6 10	19 45	28 50		
14	30 38.7		232 20.1	128	-21 59.9	92	20		36	6 03	27	16 01 42	4 44 54		
15	45 38.6		246 51.8	127	-22 09.0	91	30		51	20	46	15 40 38	5 04 57		
16	60 38.5		261 23.5	127		18.0	35		5 58	30	6 57	27 37	15 60		
17	75 38.4	+21 41.7	275 55.1	126	-22 26.9	89	40		6 07	6 40	7 10	15 13 34	5 28 63		
18	90 38.3	+21 42.1	290 26.7	126	-22 35.7	88	45		6 16	6 52	7 25	14 57 31	5 43 67		
19	105 38.3		304 58.2	125		44.3	50		26	7 07	44	37 26	6 02 72		
20	120 38.2		319 29.7	125	-22 52.9	86	52		31	13	7 53	27 24	11 74		
21	135 38.1		334 01.1	124	-23 01.4	85	54		35	20	8 03	17 20	22 76		
22	150 38.0		348 32.4	123		09.8	56		41	28	14	14 04 18	33 80		
23	165 37.9		3 03.7	123		18.0	58		46	37	26	13 50 13	6 46 86		
24	180 37.8	+21 44.4	17 35.0	123	-23 26.2	82	60 S		6 53	7 47	8 41	13 34 6	7 02 92		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 7 ^h 32.6 ^m		Mag: -4.0 PMG: 14 ^h 27 ^m		Mag: +1.4 PMG: 9 ^h 55 ^m		Mag: -1.9 PMG: 15 ^h 14 ^m		Mag: +0.9 PMG: 8 ^h 20 ^m						
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec					
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /					
0	246 32.3	143 28.7	+24 46.1	211 08.5	+13 24.2	131 05.9	+21 47.7	234 38.2	+2 40.0						
1	261 34.8	158 27.9	45.9	226 09.2	24.9	146 07.9	47.7	249 40.4	40.0						
2	276 37.2	173 27.1	45.7	241 09.8	25.5	161 09.9	47.6	264 42.7	40.1						
3	291 39.7	188 26.3	45.5	256 10.5	26.1	176 11.9	47.5	279 45.0	40.2						
4	306 42.2	203 25.5	45.3	271 11.2	26.7	191 13.8	47.4	294 47.2	40.3						
5	321 44.6	218 24.7	+24 45.1	286 11.8	+13 27.4	206 15.8	+21 47.4	309 49.5	+2 40.3						
6	336 47.1	233 23.9	+24 44.8	301 12.5	+13 28.0	221 17.8	+21 47.3	324 51.7	+2 40.4						
7	351 49.5	248 23.2	44.6	316 13.1	28.6	236 19.7	47.2	339 54.0	40.5						
8	6 52.0	263 22.4	44.4	331 13.8	29.2	251 21.7	47.1	354 56.3	40.6						
9	21 54.5	278 21.6	44.2	346 14.5	29.8	266 23.7	47.0	9 58.5	40.7						
10	36 56.9	293 20.8	43.9	1 15.1	30.5	281 25.7	47.0	25 00.8	40.7						
11	51 59.4	308 20.0	+24 43.7	16 15.8	+13 31.1	296 27.6	+21 46.9	40 03.0	+2 40.8						
12	67 01.9	323 19.2	+24 43.5	31 16.5	+13 31.7	311 29.6	+21 46.8	55 05.3	+2 40.9						
13	82 04.3	338 18.5	43.3	46 17.1	32.3	326 31.6	46.7	70 07.6	41.0						
14	97 06.8	353 17.7	43.0	61 17.8	33.0	341 33.5	46.7	85 09.8	41.0						
15	112 09.3	8 16.9	42.8	76 18.5	33.6	356 35.5	46.6	100 12.1	41.1						
16	127 11.7	23 16.1	42.6	91 19.1	34.2	11 37.5	46.5	115 14.3	41.2						
17	142 14.2	38 15.3	+24 42.3	106 19.8	+13 34.8	26 39.5	+21 46.4	130 16.6	+2 41.3						
18	157 16.6	53 14.5	+24 42.1	121 20.4	+13 35.4	41 41.4	+21 46.3	145 18.9	+2 41.3						
19	172 19.1	68 13.8	41.9	136 21.1	36.1	56 43.4	46.3	160 21.1	41.4						
20	187 21.6	83 13.0	41.6	151 21.8	36.7	71 45.4	46.2	175 23.4	41.5						
21	202 24.0	98 12.2	41.4	166 22.4	37.3	86 47.3	46.1	190 25.6	41.6						
22	217 26.5	113 11.4	41.2	181 23.1	37.9	101 49.3	46.0	205 27.9	41.7						
23	232 29.0	128 10.6	40.9	196 23.8	38.6	116 51.3	46.0	220 30.2	41.7						
24	247 31.4	143 09.9	+24 40.7	211 24.4	+13 39.2	131 53.2	+21 45.9	235 32.4	+2 41.8						
Dif	—	-8	-2	+7	+6	+20	-1	+23	+1						

UT	SOL		☾ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 57.5 ^m		Edad: 13.2 ^d PHE { 4 ^h : 54 ^h 1 12 ^h : 54 ^h 1 20 ^h : 54 ^h 0 R°: 52 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	37.8	+21	44.4	17	35.0	-23	26.2	81	60 N	21 04	22 26	** **	21 22	84	1 34	11	
1	195	37.8		44.7	32	06.1		34.3	79	58	20 46	21 53	** **	20 55	77	1 54	18	
2	210	37.7		45.1	46	37.3		42.2	78	56		32	29	23 38	34 73	2 10	23	
3	225	37.6		45.5	61	08.3		50.0	78	54		19	21 10	22 34	17 69	24 27		
4	240	37.5		45.9	75	39.3	-23	57.8	78	52	20 08	20 54	22 03	20 02	68	37 29		
5	255	37.4	+21	46.2	90	10.3	-24	05.4	76	50	19 58	20 41	21 41	19 50	65	2 47	32	
6	270	37.3	+21	46.6	104	41.2	-24	12.9	75	45	19 38	20 14	21 01	19 23	63	3 10	36	
7	285	37.2		47.0	119	12.0		20.3	74	40		21	19 53	20 34	19 03	60	29 38	
8	300	37.2		47.3	133	42.8		27.6	73	35	19 07		37	20 12	18 45	59	44 41	
9	315	37.1		47.7	148	13.6		34.8	72	30	18 55	19 22	19 55		31 57	3 57	43	
10	330	37.0		48.1	162	44.3		41.9	71	20		35	18 59	28	18 06	55	4 20 46	
11	345	36.9	+21	48.4	177	14.9	-24	48.8	69	10 N	18 17	18 40	19 07	17 44	53	4 40	48	
12	0	36.8	+21	48.8	191	45.5	-24	55.6	68	0	18 01	18 23	18 49	17 24	52	4 59	50	
13	15	36.7		49.2	206	16.0	-25	02.4	68	10 S	17 45	18 08		34	17 04	50	5 18 52	
14	30	36.6		49.5	220	46.5		09.0	66	20		28	17 52	19	16 43	48	5 38 55	
15	45	36.5		49.9	235	16.9		15.5	65	30	17 08		34	18 04	18 46	6 01	58	
16	60	36.5		50.3	249	47.3		21.8	63	35	16 57		25	17 56	16 04	44	15 60	
17	75	36.4	+21	50.6	264	17.6	-25	28.1	63	40	16 44	17 14	17 47	15 47	42	6 31	62	
18	90	36.3	+21	51.0	278	47.9	-25	34.2	61	45	16 29	17 02	17 38	15 28	39	6 50	65	
19	105	36.2		51.4	293	18.1		40.3	61	50		10	16 47	28	15 03	36	7 14 68	
20	120	36.1		51.7	307	48.3		46.2	59	52	16 01		40	23	14 51	34	25 71	
21	135	36.0		52.1	322	18.4		51.9	57	54	15 51		33	18	37 32		38 74	
22	150	35.9		52.4	336	48.5	-25	57.6	57	56		40		25	13	22 28	7 53 77	
23	165	35.8		52.8	351	18.5	-26	03.1	55	58		27		16	07	14 03	24 8 12 81	
24	180	35.7	+21	53.2	5	48.5	-26	08.5	54	60 S	15 12	16 06	17 01	13 40	17	8 34	89	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 28.7 ^m		Mag: -4.0 PMG: 14 ^h 28 ^m		Mag: +1.4 PMG: 9 ^h 54 ^m		Mag: -1.9 PMG: 15 ^h 10 ^m		Mag: +0.9 PMG: 8 ^h 17 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	247	31.4	143	09.9	+24	40.7	211	24.4	+13	39.2	131	53.2	+21	45.9	235	32.4	+2	41.8
1	262	33.9	158	09.1		40.4	226	25.1		39.8	146	55.2		45.8	250	34.7		41.9
2	277	36.4	173	08.3		40.2	241	25.7		40.4	161	57.2		45.7	265	36.9		42.0
3	292	38.8	188	07.5		39.9	256	26.4		41.0	176	59.2		45.6	280	39.2		42.0
4	307	41.3	203	06.8		39.7	271	27.1		41.6	192	01.1		45.6	295	41.5		42.1
5	322	43.8	218	06.0	+24	39.5	286	27.7	+13	42.3	207	03.1	+21	45.5	310	43.7	+2	42.2
6	337	46.2	233	05.2	+24	39.2	301	28.4	+13	42.9	222	05.1	+21	45.4	325	46.0	+2	42.3
7	352	48.7	248	04.4		39.0	316	29.1		43.5	237	07.0		45.3	340	48.3		42.3
8	7	51.1	263	03.6		38.7	331	29.7		44.1	252	09.0		45.2	355	50.5		42.4
9	22	53.6	278	02.9		38.5	346	30.4		44.7	267	11.0		45.2	10	52.8		42.5
10	37	56.1	293	02.1		38.2	1	31.0		45.4	282	12.9		45.1	25	55.0		42.6
11	52	58.5	308	01.3	+24	37.9	16	31.7	+13	46.0	297	14.9	+21	45.0	40	57.3	+2	42.6
12	68	01.0	323	00.5	+24	37.7	31	32.4	+13	46.6	312	16.9	+21	44.9	55	59.6	+2	42.7
13	83	03.5	337	59.8		37.4	46	33.0		47.2	327	18.8		44.9	71	01.8		42.8
14	98	05.9	352	59.0		37.2	61	33.7		47.8	342	20.8		44.8	86	04.1		42.9
15	113	08.4	7	58.2		36.9	76	34.3		48.4	357	22.8		44.7	101	06.4		42.9
16	128	10.9	22	57.4		36.7	91	35.0		49.1	12	24.7		44.6	116	08.6		43.0
17	143	13.3	37	56.7	+24	36.4	106	35.7	+13	49.7	27	26.7	+21	44.5	131	10.9	+2	43.1
18	158	15.8	52	55.9	+24	36.1	121	36.3	+13	50.3	42	28.7	+21	44.5	146	13.1	+2	43.2
19	173	18.3	67	55.1		35.9	136	37.0		50.9	57	30.6		44.4	161	15.4		43.2
20	188	20.7	82	54.3		35.6	151	37.6		51.5	72	32.6		44.3	176	17.7		43.3
21	203	23.2	97	53.6		35.3	166	38.3		52.1	87	34.6		44.2	191	19.9		43.4
22	218	25.6	112	52.8		35.1	181	39.0		52.7	102	36.5		44.1	206	22.2		43.5
23	233	28.1	127	52.0		34.8	196	39.6		53.4	117	38.5		44.1	221	24.5		43.5
24	248	30.6	142	51.3	+24	34.5	211	40.3	+13	54.0	132	40.5	+21	44.0	236	26.7	+2	43.6
Dif	—		-8		-3		+7		+6		+20		-1		+23		+1	

UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 57.7 ^m			Edad: 14.2 ^d PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 R°: **m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°		Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	35.7	+21	53.2	5	48.5	-26	08.5	53	60 N	** **	1 29	2 51	22 45	58	1 43	22
1	195	35.7		53.5	20	18.5		13.8	52	58	** **	2 02	3 08	22 10	57	2 10	30
2	210	35.6		53.9	34	48.4		19.0	50	56	0 17	26	23	21 45	56	32	33
3	225	35.5		54.2	49	18.2		24.0	50	54	1 21	2 45	36	25 55		2 49	37
4	240	35.4		54.6	63	48.0		29.0	50	52	1 52	3 01	47	21 08	55	3 04	39
5	255	35.3	+21	54.9	78	17.8	-26	33.8	48	50	2 14	3 14	3 57	20 54	54	3 17	40
6	270	35.2	+21	55.3	92	47.5	-26	38.4	46	45	2 54	3 41	4 17	20 24	55	3 44	43
7	285	35.1		55.6	107	17.2		43.0	46	40	3 21	4 02	34	20 02	53	4 06	44
8	300	35.0		56.0	121	46.9		47.4	44	35	3 43	19	4 48	19 43	53	23	46
9	315	34.9		56.3	136	16.5		51.7	43	30	4 00	33	5 00	19 27	52	4 39	46
10	330	34.8		56.7	150	46.1		55.8	41	20	27	4 56	20	18 59	53	5 05	48
11	345	34.8	+21	57.1	165	15.6	-26	59.9	41	10 N	4 48	5 15	5 38	18 36	52	5 27	50
12	0	34.7	+21	57.4	179	45.1	-27	03.8	39	0	5 06	5 32	5 54	18 14	51	5 48	51
13	15	34.6		57.8	194	14.6		07.6	38	10 S	22	5 48	6 10	17 52	51	6 09	52
14	30	34.5		58.1	208	44.1		11.2	36	20	37	6 04	27	29 50		32	53
15	45	34.4		58.5	223	13.5		14.7	35	30	5 52	21	47	17 02	49	6 58	55
16	60	34.3		58.8	237	42.8		18.1	34	35	6 00	31	6 59	16 46	49	7 13	56
17	75	34.2	+21	59.1	252	12.2	-27	21.4	33	40	6 08	6 42	7 12	16 28	48	7 31	57
18	90	34.1	+21	59.5	266	41.5	-27	24.5	31	45	6 17	6 54	7 27	16 06	47	7 53	58
19	105	34.0	+21	59.8	281	10.8		27.5	30	50	28	7 09	46	15 37	46	8 21	60
20	120	33.9	+22	00.2	295	40.0		30.4	29	52	32	15	7 55	24 44		35	60
21	135	33.8		00.5	310	09.3		33.1	27	54	37	23	8 05	15 08	43	8 50	62
22	150	33.7		00.9	324	38.5		35.7	26	56	43	31	16	14 49	42	9 09	64
23	165	33.6		01.2	339	07.7		38.1	24	58	49	40	29	14 26	39	9 32	67
24	180	33.5	+22	01.6	353	36.8	-27	40.5	24	60 S	6 55	7 50	8 45	13 55	35	10 02	72

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 24.7 ^m		Mag: -4.0 PMG: 14 ^h 29 ^m		Mag: +1.4 PMG: 9 ^h 53 ^m		Mag: -1.9 PMG: 15 ^h 07 ^m		Mag: +0.9 PMG: 8 ^h 13 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	248	30.6	142	51.3	+24	34.5	211	40.3	+13	54.0	132	40.5	+21	44.0	236	26.7	+2	43.6
1	263	33.0	157	50.5		34.3	226	41.0		54.6	147	42.4		43.9	251	29.0		43.7
2	278	35.5	172	49.7		34.0	241	41.6		55.2	162	44.4		43.8	266	31.2		43.8
3	293	38.0	187	49.0		33.7	256	42.3		55.8	177	46.4		43.7	281	33.5		43.8
4	308	40.4	202	48.2		33.4	271	42.9		56.4	192	48.3		43.7	296	35.8		43.9
5	323	42.9	217	47.4	+24	33.2	286	43.6	+13	57.0	207	50.3	+21	43.6	311	38.0	+2	44.0
6	338	45.4	232	46.6	+24	32.9	301	44.3	+13	57.6	222	52.3	+21	43.5	326	40.3	+2	44.1
7	353	47.8	247	45.9		32.6	316	44.9		58.3	237	54.2		43.4	341	42.6		44.1
8	8	50.3	262	45.1		32.3	331	45.6		58.9	252	56.2		43.3	356	44.8		44.2
9	23	52.8	277	44.3		32.0	346	46.2	+13	59.5	267	58.2		43.3	11	47.1		44.3
10	38	55.2	292	43.6		31.8	1	46.9	+14	00.1	283	00.1		43.2	26	49.4		44.4
11	53	57.7	307	42.8	+24	31.5	16	47.6	+14	00.7	298	02.1	+21	43.1	41	51.6	+2	44.4
12	69	00.1	322	42.0	+24	31.2	31	48.2	+14	01.3	313	04.1	+21	43.0	56	53.9	+2	44.5
13	84	02.6	337	41.3		30.9	46	48.9		01.9	328	06.0		42.9	71	56.2		44.6
14	99	05.1	352	40.5		30.6	61	49.5		02.5	343	08.0		42.9	86	58.4		44.7
15	114	07.5	7	39.7		30.3	76	50.2		03.1	358	10.0		42.8	102	00.7		44.7
16	129	10.0	22	39.0		30.1	91	50.9		03.7	13	11.9		42.7	117	03.0		44.8
17	144	12.5	37	38.2	+24	29.8	106	51.5	+14	04.4	28	13.9	+21	42.6	132	05.2	+2	44.9
18	159	14.9	52	37.5	+24	29.5	121	52.2	+14	05.0	43	15.9	+21	42.5	147	07.5	+2	45.0
19	174	17.4	67	36.7		29.2	136	52.8		05.6	58	17.8		42.5	162	09.7		45.0
20	189	19.9	82	35.9		28.9	151	53.5		06.2	73	19.8		42.4	177	12.0		45.1
21	204	22.3	97	35.2		28.6	166	54.1		06.8	88	21.8		42.3	192	14.3		45.2
22	219	24.8	112	34.4		28.3	181	54.8		07.4	103	23.7		42.2	207	16.5		45.3
23	234	27.3	127	33.6		28.0	196	55.5		08.0	118	25.7		42.1	222	18.8		45.3
24	249	29.7	142	32.9	+24	27.7	211	56.1	+14	08.6	133	27.6	+21	42.1	237	21.1	+2	45.4
Dif	—		-8	-3		+7	+6				+20	-1		+23		+1		

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 57.8 ^m				Edad: 15.2 ^d SD: 14 ^h 7 PMG: 0 ^h 26 ^m PHE { 4 ^h : 54 ^h 0 12 ^h : 54 ^h 0 20 ^h : 54 ^h 0 R°: 53 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico			Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	33.5	+22	01.6	353	36.8	-27	40.5	22	60 N	21 08	22 32	** **	23 43	31	2 05	50	
1	195	33.5		01.9	8	06.0		42.7	20	58	20 50	21 57	** **	23 07	37	2 40	51	
2	210	33.4		02.2	22	35.1		44.7	20	56	34	32	** **	22 41	40	3 05	52	
3	225	33.3		02.6	37	04.2		46.7	20	54	22	21 13	22 40	20 43	26	52		
4	240	33.2		02.9	51	33.3		48.5	18	52	10	20 57	22 07	22 03	44	43	52	
5	255	33.1	+22	03.3	66	02.4	-27	50.1	16	50	20 00	20 43	21 44	21 48	45	3 57	53	
6	270	33.0	+22	03.6	80	31.4	-27	51.7	16	45	19 40	20 16	21 04	21 19	46	4 27	52	
7	285	32.9		03.9	95	00.4		53.1	14	40	23	19 55	20 35	20 55	48	4 50	53	
8	300	32.8		04.3	109	29.5		54.3	12	35	19 09	38	20 14	36 49	5 09	53		
9	315	32.7		04.6	123	58.5		55.4	11	30	18 56	24	19 56	20 19	50	25	53	
10	330	32.6		05.0	138	27.5		56.4	10	20	36	19 00	29	19 52	50	5 53	53	
11	345	32.5	+22	05.3	152	56.5	-27	57.3	9	10 N	18 18	18 41	19 08	19 28	51	6 17	53	
12	0	32.4	+22	05.6	167	25.5	-27	58.0	7	0	18 01	18 24	18 50	19 05	53	6 39	53	
13	15	32.3		06.0	181	54.4		58.6	6	10 S	17 45	18 08	34	18 43	53	7 01	53	
14	30	32.2		06.3	196	23.4		59.0	4	20	28	17 51	19	18 19	54	25	52	
15	45	32.1		06.6	210	52.4		59.3	3	30	17 08	34	18 03	17 51	55	7 53	52	
16	60	32.0		07.0	225	21.3		59.5	2	35	16 56	24	17 55	35 56	8 09	52		
17	75	31.9	+22	07.3	239	50.3	-27	59.6	1	40	16 43	17 13	17 47	17 16	56	8 28	52	
18	90	31.8	+22	07.6	254	19.3	-27	59.5	1	45	16 27	17 01	17 37	16 53	57	8 51	51	
19	105	31.7		07.9	268	48.2		59.2	3	50	16 08	16 46	27	23 58		9 21	50	
20	120	31.6		08.3	283	17.2		58.9	3	52	15 59	39	22	16 08	59	35	51	
21	135	31.5		08.6	297	46.2		58.4	5	54	49	32	17	15 51	60	9 52	50	
22	150	31.4		08.9	312	15.1		57.7	7	56	38	23	11	31 60		10 13	49	
23	165	31.3		09.3	326	44.1		57.0	7	58	24	14	17 05	15 05	62	10 39	47	
24	180	31.2	+22	09.6	341	13.1	-27	56.0	10	60 S	15 09	16 04	16 59	14 30	65	11 14	44	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 20.8 ^m		Mag: -4.0 PMG: 14 ^h 31 ^m		Mag: +1.4 PMG: 9 ^h 52 ^m		Mag: -1.9 PMG: 15 ^h 04 ^m		Mag: +0.9 PMG: 8 ^h 09 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	249	29.7	142	32.9	+24	27.7	211	56.1	+14	08.6	133	27.6	+21	42.1	237	21.1	+2	45.4
1	264	32.2	157	32.1		27.4	226	56.8		09.2	148	29.6		42.0	252	23.3		45.5
2	279	34.6	172	31.4		27.1	241	57.4		09.8	163	31.6		41.9	267	25.6		45.6
3	294	37.1	187	30.6		26.8	256	58.1		10.4	178	33.5		41.8	282	27.9		45.6
4	309	39.6	202	29.8		26.5	271	58.8		11.0	193	35.5		41.7	297	30.1		45.7
5	324	42.0	217	29.1	+24	26.2	286	59.4	+14	11.7	208	37.5	+21	41.7	312	32.4	+2	45.8
6	339	44.5	232	28.3	+24	25.9	302	00.1	+14	12.3	223	39.4	+21	41.6	327	34.7	+2	45.9
7	354	47.0	247	27.6		25.6	317	00.7		12.9	238	41.4		41.5	342	36.9		45.9
8	9	49.4	262	26.8		25.3	332	01.4		13.5	253	43.4		41.4	357	39.2		46.0
9	24	51.9	277	26.0		25.0	347	02.1		14.1	268	45.3		41.3	12	41.5		46.1
10	39	54.4	292	25.3		24.7	2	02.7		14.7	283	47.3		41.3	27	43.7		46.1
11	54	56.8	307	24.5	+24	24.3	17	03.4	+14	15.3	298	49.2	+21	41.2	42	46.0	+2	46.2
12	69	59.3	322	23.8	+24	24.0	32	04.0	+14	15.9	313	51.2	+21	41.1	57	48.3	+2	46.3
13	85	01.7	337	23.0		23.7	47	04.7		16.5	328	53.2		41.0	72	50.5		46.4
14	100	04.2	352	22.3		23.4	62	05.3		17.1	343	55.1		40.9	87	52.8		46.4
15	115	06.7	7	21.5		23.1	77	06.0		17.7	358	57.1		40.9	102	55.1		46.5
16	130	09.1	22	20.8		22.8	92	06.7		18.3	13	59.1		40.8	117	57.3		46.6
17	145	11.6	37	20.0	+24	22.5	107	07.3	+14	18.9	29	01.0	+21	40.7	132	59.6	+2	46.7
18	160	14.1	52	19.2	+24	22.1	122	08.0	+14	19.5	44	03.0	+21	40.6	148	01.9	+2	46.7
19	175	16.5	67	18.5		21.8	137	08.6		20.1	59	04.9		40.5	163	04.2		46.8
20	190	19.0	82	17.7		21.5	152	09.3		20.7	74	06.9		40.4	178	06.4		46.9
21	205	21.5	97	17.0		21.2	167	09.9		21.3	89	08.9		40.4	193	08.7		47.0
22	220	23.9	112	16.2		20.8	182	10.6		21.9	104	10.8		40.3	208	11.0		47.0
23	235	26.4	127	15.5		20.5	197	11.3		22.5	119	12.8		40.2	223	13.2		47.1
24	250	28.9	142	14.7	+24	20.2	212	11.9	+14	23.1	134	14.7	+21	40.1	238	15.5	+2	47.2
Dif	—		-8		-3		+7		+6		+20		-1		+23		+	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15/8 PMG:11 ^h 58.0 ^m				Edad: 16.2 ^d SD: 14/7 PMG: 1 ^h 18 ^m					PHE { 4 ^h : 54/0 12 ^h : 54/0 20 ^h : 54/1 R°: 51 ^m			Hora R°			Hora R°			
	hG ☉	Dec			hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	180	31.2	+22	09.6	341	13.1	-27	56.0	10	60 N	** **	1 23	2 48	** ** *	2 54	77			
1	195	31.2		09.9	355	42.1		55.0	12	58	** **	1 58	3 06	23 43	19	3 30	70		
2	210	31.1		10.2	10	11.1		53.8	13	56	** **	2 23	21	20 25		3 56	67		
3	225	31.0		10.6	24	40.1		52.5	14	54	1 16	43	34	23 01	28	4 16	65		
4	240	30.9		10.9	39	09.1		51.1	16	52	1 48	2 59	45	22 45	31	34	63		
5	255	30.8	+22	11.2	53	38.1	-27	49.5	17	50	2 11	3 12	3 55	22 32	33	4 48	62		
6	270	30.7	+22	11.5	68	07.2	-27	47.8	19	45	2 52	3 40	4 16	22 04	37	5 18	59		
7	285	30.6		11.9	82	36.2		45.9	20	40	3 20	4 01	33	21 42	39	5 41	58		
8	300	30.5		12.2	97	05.3		43.9	21	35	42	18	47	24 41		6 00	57		
9	315	30.4		12.5	111	34.4		41.8	23	30	3 59	32	4 59	21 08	43	17	55		
10	330	30.3		12.8	126	03.5		39.5	24	20	4 27	4 56	5 20	20 41	46	6 44	54		
11	345	30.2	+22	13.1	140	32.7	-27	37.1	25	10 N	4 48	5 15	5 38	20 18	48	7 08	52		
12	0	30.1	+22	13.5	155	01.8	-27	34.6	26	0	5 06	5 32	5 54	19 57	50	7 30	51		
13	15	30.0		13.8	169	31.0		32.0	28	10 S	22	5 48	6 11	35 52		7 52	50		
14	30	29.9		14.1	184	00.2		29.2	30	20	37	6 04	28	19 12	54	8 16	48		
15	45	29.8		14.4	198	29.4		26.2	32	30	5 53	22	6 48	18 45	57	43	46		
16	60	29.7		14.7	212	58.7		23.2	33	35	6 01	32	7 00	29 58		8 59	45		
17	75	29.6	+22	15.0	227	27.9	-27	20.0	34	40	6 09	6 43	7 13	18 11	60	9 18	43		
18	90	29.5	+22	15.4	241	57.2	-27	16.7	35	45	6 19	6 55	7 29	17 48	63	9 41	41		
19	105	29.4		15.7	256	26.6		13.2	35	50	29	7 10	48	20 65		10 10	38		
20	120	29.3		16.0	270	55.9		09.7	37	52	34	17	7 57	17 06	67	24	36		
21	135	29.2		16.3	285	25.3		06.0	39	54	39	25	8 07	16 49	70	10 41	34		
22	150	29.1		16.6	299	54.7	-27	02.1	40	56	45	33	19	30 73		11 00	31		
23	165	29.0		16.9	314	24.2	-26	58.1	41	58	51	42	32	16 06	77	24	28		
24	180	28.9	+22	17.2	328	53.7	-26	54.0		60 S	6 58	7 53	8 48	15 33	85	11 57	20		

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 7 ^h 16.9 ^m			Mag: -4.0 PMG: 14 ^h 32 ^m			Mag: +1.4 PMG: 9 ^h 51 ^m			Mag: -1.9 PMG: 15 ^h 01 ^m			Mag: +0.9 PMG: 8 ^h 06 ^m					
	hG ♊	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	250	28.9	142	14.7	+24	20.2	212	11.9	+14	23.1	134	14.7	+21	40.1	238	15.5		
1	265	31.3	157	14.0		19.9	227	12.6		23.7	149	16.7		40.0	253	17.8		
2	280	33.8	172	13.2		19.5	242	13.2		24.3	164	18.7		40.0	268	20.0		
3	295	36.2	187	12.5		19.2	257	13.9		24.9	179	20.6		39.9	283	22.3		
4	310	38.7	202	11.7		18.9	272	14.6		25.5	194	22.6		39.8	298	24.6		
5	325	41.2	217	11.0	+24	18.5	287	15.2	+14	26.1	209	24.5	+21	39.7	313	26.8		
6	340	43.6	232	10.2	+24	18.2	302	15.9	+14	26.7	224	26.5	+21	39.6	328	29.1		
7	355	46.1	247	09.5		17.9	317	16.5		27.3	239	28.5		39.5	343	31.4		
8	10	48.6	262	08.7		17.5	332	17.2		27.9	254	30.4		39.5	358	33.7		
9	25	51.0	277	08.0		17.2	347	17.8		28.5	269	32.4		39.4	13	35.9		
10	40	53.5	292	07.2		16.9	2	18.5		29.1	284	34.4		39.3	28	38.2		
11	55	56.0	307	06.5	+24	16.5	17	19.1	+14	29.7	299	36.3	+21	39.2	43	40.5		
12	70	58.4	322	05.7	+24	16.2	32	19.8	+14	30.3	314	38.3	+21	39.1	58	42.7		
13	86	00.9	337	05.0		15.8	47	20.5		30.9	329	40.2		39.1	73	45.0		
14	101	03.4	352	04.3		15.5	62	21.1		31.5	344	42.2		39.0	88	47.3		
15	116	05.8	7	03.5		15.2	77	21.8		32.1	359	44.1		38.9	103	49.5		
16	131	08.3	22	02.8		14.8	92	22.4		32.7	14	46.1		38.8	118	51.8		
17	146	10.7	37	02.0	+24	14.5	107	23.1	+14	33.3	29	48.1	+21	38.7	133	54.1		
18	161	13.2	52	01.3	+24	14.1	122	23.7	+14	33.9	44	50.0	+21	38.6	148	56.4		
19	176	15.7	67	00.5		13.8	137	24.4		34.5	59	52.0		38.6	163	58.6		
20	191	18.1	81	59.8		13.4	152	25.1		35.1	74	53.9		38.5	179	00.9		
21	206	20.6	96	59.0		13.1	167	25.7		35.7	89	55.9		38.4	194	03.2		
22	221	23.1	111	58.3		12.7	182	26.4		36.3	104	57.9		38.3	209	05.4		
23	236	25.5	126	57.6		12.4	197	27.0		36.9	119	59.8		38.2	224	07.7		
24	251	28.0	141	56.8	+24	12.0	212	27.7	+14	37.5	135	01.8	+21	38.2	239	10.0		
Dif	—			-7			+3			+6			+20			-1		

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 58.2 ^m				Edad: 17.2 ^d SD: 14'7 PMG: 2 ^h 09 ^m PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'3 Rº: 51 ^m																
	hG ☉	Dec			hG ☾	Dif			Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m			
0	180	28.9	+22	17.2	328	53.7	-26	54.0	42	60 N	21 11	22 38	** **	0 12 14	4 11 92						
1	195	28.8		17.5	343	23.2		49.8	43	58	20 52	22 01	** **	** **	4 40 84						
2	210	28.6		17.9	357	52.7		45.5	45	56	37	21 36	** **	23 45 17	5 03 79						
3	225	28.5		18.2	12	22.3		41.0	46	54	24	21 16	22 45	29 21	21 75						
4	240	28.4		18.5	26	51.9		36.4	48	52	12	20 59	22 11	16 24	37 72						
5	255	28.3	+22	18.8	41	21.6	-26	31.6	48	50	20 02	20 46	21 47	23 05 26	5 50 70						
6	270	28.2	+22	19.1	55	51.3	-26	26.8	48	45	19 41	20 18	21 06	22 41 30	6 17 66						
7	285	28.1		19.4	70	21.0		21.8	50	40	24	19 56	20 37	21 35	39 63						
8	300	28.0		19.7	84	50.8		16.7	51	35	19 10	39	20 15	22 05 37	6 57 60						
9	315	27.9		20.0	99	20.6		11.4	53	30	18 58	25	19 58	21 51 39	7 12 59						
10	330	27.8		20.3	113	50.5		06.0	54	20	37	19 01	30	27 43	7 38 56						
11	345	27.7	+22	20.6	128	20.4	-26	00.6	54	10 N	18 19	18 41	19 08	21 06 46	8 00 53						
12	0	27.6	+22	20.9	142	50.3	-25	54.9	57	0	18 02	18 24	18 50	20 47 49	8 21 50						
13	15	27.5		21.2	157	20.3		49.2	57	10 S	17 45	18 08	34	27 52	8 42 47						
14	30	27.4		21.5	171	50.4		43.4	58	20	28	17 51	19	20 06 55	9 04 45						
15	45	27.3		21.8	186	20.4		37.4	60	30	17 07	34	18 03	19 42 59	29 42						
16	60	27.2		22.1	200	50.6		31.3	61	35	16 56	24	17 55	27 62	9 44 40						
17	75	27.1	+22	22.4	215	20.7	-25	25.1	62	40	16 42	17 13	17 46	19 11 64	10 01 38						
18	90	27.0	+22	22.7	229	50.9	-25	18.7	64	45	16 27	17 00	17 37	18 51 67	10 22 34						
19	105	26.9		23.0	244	21.2		12.3	64	50	16 07	16 45	26	25 73	10 48 30						
20	120	26.8		23.3	258	51.5	-25	05.7	66	52	15 58	38	21	18 13 75	11 00 28						
21	135	26.7		23.6	273	21.9	-24	59.0	67	54	48	30	16	17 59 78	15 25						
22	150	26.6		23.9	287	52.3		52.2	68	56	36	22	10	43 81	31 22						
23	165	26.5		24.2	302	22.7		45.2	70	58	22	12	17 04	17 23 86	11 52 16						
24	180	26.4	+22	24.5	316	53.2	-24	38.2	70	60 S	15 06	16 02	16 57	16 58 94	12 17 9						

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 7 ^h 12.9 ^m		Mag: -4.0 PMG: 14 ^h 33 ^m			Mag: +1.4 PMG: 9 ^h 50 ^m			Mag: -1.9 PMG: 14 ^h 58 ^m			Mag: +0.9 PMG: 8 ^h 02 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	251	28.0	141	56.8	+24	12.0	212	27.7	+14	37.5	135	01.8	+21	38.2	
1	266	30.5	156	56.1		11.7	227	28.3		38.1	150	03.7		38.1	
2	281	32.9	171	55.3		11.3	242	29.0		38.7	165	05.7		38.0	
3	296	35.4	186	54.6		11.0	257	29.6		39.3	180	07.6		37.9	
4	311	37.9	201	53.9		10.6	272	30.3		39.9	195	09.6		37.8	
5	326	40.3	216	53.1	+24	10.2	287	31.0	+14	40.4	210	11.6	+21	37.7	
6	341	42.8	231	52.4	+24	09.9	302	31.6	+14	41.0	225	13.5	+21	37.7	
7	356	45.2	246	51.6		09.5	317	32.3		41.6	240	15.5		37.6	
8	11	47.7	261	50.9		09.1	332	32.9		42.2	255	17.4		37.5	
9	26	50.2	276	50.2		08.8	347	33.6		42.8	270	19.4		37.4	
10	41	52.6	291	49.4		08.4	2	34.2		43.4	285	21.4		37.3	
11	56	55.1	306	48.7	+24	08.1	17	34.9	+14	44.0	300	23.3	+21	37.2	
12	71	57.6	321	48.0	+24	07.7	32	35.5	+14	44.6	315	25.3	+21	37.2	
13	87	00.0	336	47.2		07.3	47	36.2		45.2	330	27.2		37.1	
14	102	02.5	351	46.5		06.9	62	36.8		45.8	345	29.2		37.0	
15	117	05.0	6	45.8		06.6	77	37.5		46.4	0	31.1		36.9	
16	132	07.4	21	45.0		06.2	92	38.2		47.0	15	33.1		36.8	
17	147	09.9	36	44.3	+24	05.8	107	38.8	+14	47.6	30	35.0	+21	36.7	
18	162	12.4	51	43.6	+24	05.5	122	39.5	+14	48.1	45	37.0	+21	36.7	
19	177	14.8	66	42.8		05.1	137	40.1		48.7	60	39.0		36.6	
20	192	17.3	81	42.1		04.7	152	40.8		49.3	75	40.9		36.5	
21	207	19.7	96	41.4		04.3	167	41.4		49.9	90	42.9		36.4	
22	222	22.2	111	40.6		03.9	182	42.1		50.5	105	44.8		36.3	
23	237	24.7	126	39.9		03.6	197	42.7		51.1	120	46.8		36.2	
24	252	27.1	141	39.2	+24	03.2	212	43.4	+14	51.7	135	48.7	+21	36.2	
Dif	—		-7		-4		+7		+6		+20		-1		+23

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG:11 ^h 58.3 ^m			Edad: 18.2 ^d PHE { 4 ^h : 54/4 12 ^h : 54/5 20 ^h : 54/6 PMG: 2 ^h 58 ^m R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	°	'	°	'	°	°	h	m	h	m	h	m	h	m	
0	180	26.4	+22	24.5	316	53.2	115	-24	38.2	72	60 N	** **	1 18	2 45	0 24	5	5 41	
1	195	26.3		24.8	331	23.7	115		31.0	72	58	** **	1 55	3 04	0 02	12	6 03	
2	210	26.2		25.1	345	54.3	116		23.8	74	56	** **	2 20	19	** **	**	20 82	
3	225	26.0		25.4	0	25.0	117		16.4	75	54	1 11	40	32	23 49	14	35 78	
4	240	25.9		25.7	14	55.7	117		08.9	75	52	1 45	2 57	44	39 17	48	74	
5	255	25.8	+22	25.9	29	26.4	117	-24	01.3	76	50	2 09	3 11	3 54	23 29	20	6 59	
6	270	25.7	+22	26.2	43	57.2	118	-23	53.5	78	45	2 50	3 39	4 15	23 10	24	7 22	
7	285	25.6		26.5	58	28.1	119		45.7	78	40	3 19	4 00	32	22 54	28	41 63	
8	300	25.5		26.8	72	59.0	119		37.7	80	35	41	17	46	41 31	7	56 61	
9	315	25.4		27.1	87	29.9	119		29.7	80	30	3 59	32	4 59	29 34	8	09 58	
10	330	25.3		27.4	102	00.9	120		21.5	82	20	4 27	4 55	5 20	22 09	38	32 54	
11	345	25.2	+22	27.7	116	32.0	121	-23	13.2	83	10 N	4 48	5 15	5 38	21 51	42	8 52	
12	0	25.1	+22	28.0	131	03.1	121	-23	04.8	84	0	5 06	5 32	5 55	21 34	46	9 10	
13	15	25.0		28.3	145	34.2	121	-22	56.4	84	10 S	22	5 49	6 11	18 49	28	44	
14	30	24.9		28.5	160	05.4	122		47.8	86	20	38	6 05	29	21 00	53	9 47	
15	45	24.8		28.8	174	36.7	123		39.1	87	30	5 53	23	6 49	20 39	58	10 09	
16	60	24.7		29.1	189	08.0	123		30.2	89	35	6 02	33	7 01	27 61	22	34	
17	75	24.5	+22	29.4	203	39.4	124	-22	21.3	89	40	6 10	6 44	7 14	20 13	64	10 37	
18	90	24.4	+22	29.7	218	10.8	124	-22	12.3	90	45	6 20	6 57	7 30	19 57	68	10 55	
19	105	24.3		30.0	232	42.2	124	-22	03.2	91	50	31	7 12	50	36 73	11	16 22	
20	120	24.2		30.2	247	13.8	126	-21	54.0	92	52	36	19	7 59	26 76	27	19	
21	135	24.1		30.5	261	45.3	125		44.6	94	54	41	27	8 10	15 79	38	17	
22	150	24.0		30.8	276	16.9	126		35.2	94	56	47	35	21	19 03	82	11 51	
23	165	23.9		31.1	290	48.6	127		25.7	95	58	6 53	45	35	18 48	86	12 07	
24	180	23.8	+22	31.3	305	20.3	127	-21	16.1	96	60 S	7 00	7 55	8 51	18 30	92	12 25	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: -4.0 7 ^h 09.0 ^m			Mag: -4.0 PMG: 14 ^h 34 ^m			Mag: +1.4 PMG: 9 ^h 49 ^m			Mag: -1.9 PMG: 14 ^h 55 ^m			Mag: +0.9 PMG: 7 ^h 58 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	h	m	h	m	h	m		
0	252	27.1	141	39.2	+24	03.2	212	43.4	+14	51.7	135	48.7	+21	36.2	240	04.5		
1	267	29.6	156	38.4		02.8	227	44.0		52.3	150	50.7		36.1	255	06.8		
2	282	32.1	171	37.7		02.4	242	44.7		52.9	165	52.6		36.0	270	09.1		
3	297	34.5	186	37.0		02.0	257	45.4		53.4	180	54.6		35.9	285	11.4		
4	312	37.0	201	36.3		01.6	272	46.0		54.0	195	56.6		35.8	300	13.6		
5	327	39.5	216	35.5	+24	01.3	287	46.7	+14	54.6	210	58.5	+21	35.7	315	15.9		
6	342	41.9	231	34.8	+24	00.9	302	47.3	+14	55.2	226	00.5	+21	35.7	330	18.2		
7	357	44.4	246	34.1		00.5	317	48.0		55.8	241	02.4		35.6	345	20.5		
8	12	46.9	261	33.3	+24	00.1	332	48.6		56.4	256	04.4		35.5	0	22.7		
9	27	49.3	276	32.6	+23	59.7	347	49.3		57.0	271	06.3		35.4	15	25.0		
10	42	51.8	291	31.9		59.3	2	49.9		57.6	286	08.3		35.3	30	27.3		
11	57	54.2	306	31.2	+23	58.9	17	50.6	+14	58.1	301	10.2	+21	35.2	45	29.6		
12	72	56.7	321	30.4	+23	58.5	32	51.2	+14	58.7	316	12.2	+21	35.1	60	31.8		
13	87	59.2	336	29.7		58.1	47	51.9		59.3	331	14.1		35.1	75	34.1		
14	103	01.6	351	29.0		57.7	62	52.5	+14	59.9	346	16.1		35.0	90	36.4		
15	118	04.1	6	28.3		57.3	77	53.2	+15	00.5	1	18.1		34.9	105	38.7		
16	133	06.6	21	27.5		56.9	92	53.8		01.1	16	20.0		34.8	120	40.9		
17	148	09.0	36	26.8	+23	56.5	107	54.5	+15	01.6	31	22.0	+21	34.7	135	43.2		
18	163	11.5	51	26.1	+23	56.1	122	55.1	+15	02.2	46	23.9	+21	34.6	150	45.5		
19	178	14.0	66	25.4		55.7	137	55.8		02.8	61	25.9		34.6	165	47.8		
20	193	16.4	81	24.7		55.3	152	56.5		03.4	76	27.8		34.5	180	50.0		
21	208	18.9	96	23.9		54.9	167	57.1		04.0	91	29.8		34.4	195	52.3		
22	223	21.3	111	23.2		54.5	182	57.8		04.6	106	31.7		34.3	210	54.6		
23	238	23.8	126	22.5		54.1	197	58.4		05.1	121	33.7		34.2	225	56.9		
24	253	26.3	141	21.8	+23	53.7	212	59.1	+15	05.7	136	35.6	+21	34.1	240	59.1		
Dif	—			-7			+7			+6			+20			-1		

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 58.5 ^m			Edad: 19.2 ^d SD: 14'9 PMG: 3 ^h 46 ^m			PHE { 4 ^h : 54'8 12 ^h : 54'9 20 ^h : 55'1 Rº: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	180	23.8	+22	31.3	305	20.3	-21	16.1	97	60 N	21 14	22 45	** **	0 29	4	7 14	93		
1	195	23.7		31.6	319	52.1	-21	06.4	99	58	20 55	22 05	** **	14	8		29	88	
2	210	23.6		31.9	334	23.9	-20	56.5	99	56	39	21 39	** **	0 01	12	42	83		
3	225	23.5		32.2	348	55.8		46.6	100	54	26	19	22 51	** **	*	7 53	80		
4	240	23.3		32.5	3	27.7		36.6	100	52	14	21 02	22 15	23 56	14	8 02	78		
5	255	23.2	+22	32.7	17	59.7	-20	26.5	101	50	20 04	20 48	21 50	23 49	17	8 11	75		
6	270	23.1	+22	33.0	32	31.7	-20	16.3	102	45	19 43	20 19	21 08	23 34	22	8 29	70		
7	285	23.0		33.3	47	03.8	-20	06.0	103	40	25	19 58	20 39	22 26		44	66		
8	300	22.9		33.5	61	35.9	-19	55.6	104	35	19 11	40	20 17	12 29		8 57	62		
9	315	22.8		33.8	76	08.0		45.1	105	30	18 59	26	19 59	23 03	32	9 07	60		
10	330	22.7		34.1	90	40.3		34.6	105	20	37	19 02	31	22 47	37	26	54		
11	345	22.6	+22	34.4	105	12.5	-19	23.9	107	10 N	18 19	18 42	19 09	22 33	42	9 42	50		
12	0	22.5	+22	34.6	119	44.8	-19	13.2	107	0	18 02	18 25	18 51	22 20	46	9 57	46		
13	15	22.4		34.9	134	17.2	-19	02.3	109	10 S	17 45	18 08	34	22 07	50	10 12	42		
14	30	22.2		35.2	148	49.6	-18	51.4	109	20	28	17 51	19	21 53	54	27	39		
15	45	22.1		35.4	163	22.0		40.4	110	30	17 07	33	18 03	37 59		45	34		
16	60	22.0		35.7	177	54.5		29.3	111	35	16 55	23	17 55	28 62		10 56	30		
17	75	21.9	+22	36.0	192	27.0	-18	18.1	112	40	16 42	17 12	17 46	21 17	66	11 07	28		
18	90	21.8	+22	36.2	206	59.6	-18	06.8	113	45	16 26	16 59	17 36	21 05	69	11 21	24		
19	105	21.7		36.5	221	32.3	-17	55.4	114	50	16 06	44	25	20 49	75	38	19		
20	120	21.6		36.8	236	04.9		44.0	114	52	15 57	37	20	42 77		46	16		
21	135	21.5		37.0	250	37.6		32.4	116	54	46	29	15	34 80		11 55	14		
22	150	21.3		37.3	265	10.4		20.8	116	56	34	21	09	25 83		12 05	10		
23	165	21.2		37.6	279	43.2	-17	09.1	117	58	21	11	17 03	14 88		16	7		
24	180	21.1	+22	37.8	294	16.0	-16	57.4	117	60 S	15 04	16 00	16 56	20 02	92	12 29	2		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG 7 ^h 05.1 ^m		Mag: -4.0 PMG: 14 ^h 35 ^m		Mag: +1.4 PMG: 9 ^h 48 ^m		Mag: -1.9 PMG: 14 ^h 52 ^m		Mag: +0.9 PMG: 7 ^h 55 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	253	26.3	141	21.8	+23	53.7	212	59.1	+15	05.7	136	35.6	+21	34.1	240	59.1	+2	52.3	
1	268	28.7	156	21.1		53.3	227	59.7		06.3	151	37.6		34.0	256	01.4		52.3	
2	283	31.2	171	20.4		52.9	243	00.4		06.9	166	39.5		34.0	271	03.7		52.4	
3	298	33.7	186	19.6		52.5	258	01.0		07.5	181	41.5		33.9	286	06.0		52.5	
4	313	36.1	201	18.9		52.0	273	01.7		08.1	196	43.4		33.8	301	08.3		52.5	
5	328	38.6	216	18.2	+23	51.6	288	02.3	+15	08.6	211	45.4	+21	33.7	316	10.5	+2	52.6	
6	343	41.1	231	17.5	+23	51.2	303	03.0	+15	09.2	226	47.3	+21	33.6	331	12.8	+2	52.7	
7	358	43.5	246	16.8		50.8	318	03.6		09.8	241	49.3		33.5	346	15.1		52.7	
8	13	46.0	261	16.1		50.4	333	04.3		10.4	256	51.3		33.5	1	17.4		52.8	
9	28	48.5	276	15.3		50.0	348	04.9		11.0	271	53.2		33.4	16	19.6		52.9	
10	43	50.9	291	14.6		49.5	3	05.6		11.5	286	55.2		33.3	31	21.9		53.0	
11	58	53.4	306	13.9	+23	49.1	18	06.2	+15	12.1	301	57.1	+21	33.2	46	24.2	+2	53.0	
12	73	55.8	321	13.2	+23	48.7	33	06.9	+15	12.7	316	59.1	+21	33.1	61	26.5	+2	53.1	
13	88	58.3	336	12.5		48.3	48	07.5		13.3	332	01.0		33.0	76	28.8		53.2	
14	104	00.8	351	11.8		47.8	63	08.2		13.8	347	03.0		32.9	91	31.0		53.2	
15	119	03.2	6	11.1		47.4	78	08.8		14.4	2	04.9		32.9	106	33.3		53.3	
16	134	05.7	21	10.4		47.0	93	09.5		15.0	17	06.9		32.8	121	35.6		53.4	
17	149	08.2	36	09.6	+23	46.6	108	10.1	+15	15.6	32	08.8	+21	32.7	136	37.9	+2	53.4	
18	164	10.6	51	08.9	+23	46.1	123	10.8	+15	16.2	47	10.8	+21	32.6	151	40.1	+2	53.5	
19	179	13.1	66	08.2		45.7	138	11.4		16.7	62	12.7		32.5	166	42.4		53.6	
20	194	15.6	81	07.5		45.3	153	12.1		17.3	77	14.7		32.4	181	44.7		53.6	
21	209	18.0	96	06.8		44.8	168	12.7		17.9	92	16.6		32.3	196	47.0		53.7	
22	224	20.5	111	06.1		44.4	183	13.4		18.5	107	18.6		32.3	211	49.3		53.8	
23	239	23.0	126	05.4		44.0	198	14.0		19.0	122	20.5		32.2	226	51.5		53.8	
24	254	25.4	141	04.7	+23	43.5	213	14.7	+15	19.6	137	22.5	+21	32.1	241	53.8	+2	53.9	
Dif	—		-7		-4		+7		+6		+20		-1		+23			+	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna							
	SD: 15/8 PMG: 11 ^h 58.7 ^m			Edad: 20.2 ^d PHE { 4 ^h : 55/3 12 ^h : 55/5 20 ^h : 55/7 PMG: 4 ^h 31 ^m R°: 44 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Náutico	Civil		Hora	R°	Hora	R°							
h	°	'	°	°	'	°	'	°		°	h m	h m	h m	h m m	h m m	h m m								
0	180	21.1	+22	37.8	294	16.0	139	-16	57.4	119	60 N	** **	1 12	2 43	0 31	1	8 46	89						
1	195	21.0		38.1	308	48.9	139		45.5	119	58	** **	1 51	3 02	21	4	8 55	86						
2	210	20.9		38.3	323	21.8	139		33.6	120	56	** **	2 18	17	11	8	9 04	82						
3	225	20.8		38.6	337	54.7	140		21.6	121	54	1 06	38	31	0 03	11	12	78						
4	240	20.7		38.9	352	27.7	140	-16	09.5	122	52	1 42	2 55	43	** **	** **	18	76						
5	255	20.6	+22	39.1	7	00.7	140	-15	57.3	122	50	2 07	3 09	3 53	** **	** **	9 24	74						
6	270	20.4	+22	39.4	21	33.8	141	-15	45.1	122	45	2 49	3 38	4 14	23 55	19	9 37	69						
7	285	20.3		39.6	36	06.9	141		32.7	124	40	3 18	3 59	32	47 22	48	64	64						
8	300	20.2		39.9	50	40.0	141		20.3	124	35	40	4 17	46	40 26	9	57	61						
9	315	20.1		40.1	65	13.2	142	-15	07.9	124	30	3 58	31	4 59	34 29	10	05	58						
10	330	20.0		40.4	79	46.4	142	-14	55.3	126	20	4 26	4 55	5 20	23 34	19	52							
11	345	19.9	+22	40.7	94	19.6	142	-14	42.7	126	10 N	4 48	5 15	5 38	23 13	39	10 31	48						
12	0	19.8	+22	40.9	108	52.9	143	-14	30.0	127	0	5 07	5 33	5 55	23 05	43	10 42	43						
13	15	19.6		41.2	123	26.2	143		17.3	127	10 S	23	5 49	6 12	22 56	47	10 53	39						
14	30	19.5		41.4	137	59.5	143	-14	04.4	129	20	38	6 06	30	46 52	11	04	35						
15	45	19.4		41.7	152	32.9	144	-13	51.5	129	30	5 54	24	6 50	35 58	17	30							
16	60	19.3		41.9	167	06.2	143		38.6	129	35	6 03	34	7 02	29 61	25	27							
17	75	19.2	+22	42.2	181	39.7	145	-13	25.5	131	40	6 12	6 45	7 16	22 21	65	11 34	23						
18	90	19.1	+22	42.4	196	13.1	144	-13	12.4	131	45	6 21	6 58	7 32	22 13	69	11 44	19						
19	105	19.0		42.7	210	46.6	145	-12	59.3	131	50	32	7 14	7 52	22 03	74	11 56	14						
20	120	18.8		42.9	225	20.0	144		46.0	133	52	37	21	8 01	21 58	76	12 01	12						
21	135	18.7		43.2	239	53.6	146		32.7	133	54	43	28	12	53 79	07	10							
22	150	18.6		43.4	254	27.1	145		19.4	133	56	49	37	24	47 82	14	7							
23	165	18.5		43.6	269	00.6	145	-12	05.9	135	58	6 55	47	37	40 86	21	4							
24	180	18.4	+22	43.9	283	34.2	146	-11	52.5	134	60 S	7 02	7 58	8 54	21 33	89	12 30	0						
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 7 ^h 01.2 ^m			Mag: -4.0 PMG: 14 ^h 36 ^m			Mag: +1.4 PMG: 9 ^h 47 ^m			Mag: -1.9 PMG: 14 ^h 49 ^m			Mag: +0.9 PMG: 7 ^h 51 ^m											
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec										
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°									
0	254	25.4	141	04.7	+23	43.5	213	14.7	+15	19.6	137	22.5	+21	32.1	241	53.8	+2	53.9						
1	269	27.9	156	04.0		43.1	228	15.3		20.2	152	24.4		32.0	256	56.1		54.0						
2	284	30.3	171	03.3		42.7	243	16.0		20.8	167	26.4		31.9	271	58.4		54.0						
3	299	32.8	186	02.6		42.2	258	16.6		21.3	182	28.3		31.8	287	00.7		54.1						
4	314	35.3	201	01.9		41.8	273	17.3		21.9	197	30.3		31.7	302	02.9		54.2						
5	329	37.7	216	01.2	+23	41.3	288	17.9	+15	22.5	212	32.2	+21	31.7	317	05.2	+2	54.2						
6	344	40.2	231	00.5	+23	40.9	303	18.6	+15	23.1	227	34.2	+21	31.6	332	07.5	+2	54.3						
7	359	42.7	245	59.8		40.5	318	19.2		23.6	242	36.1		31.5	347	09.8		54.4						
8	14	45.1	260	59.0		40.0	333	19.9		24.2	257	38.1		31.4	2	12.1		54.4						
9	29	47.6	275	58.3		39.6	348	20.5		24.8	272	40.0		31.3	17	14.3		54.5						
10	44	50.1	290	57.6		39.1	3	21.2		25.4	287	42.0		31.2	32	16.6		54.6						
11	59	52.5	305	56.9	+23	38.7	18	21.8	+15	25.9	302	43.9	+21	31.1	47	18.9	+2	54.6						
12	74	55.0	320	56.2	+23	38.2	33	22.5	+15	26.5	317	45.9	+21	31.1	62	21.2	+2	54.7						
13	89	57.5	335	55.5		37.8	48	23.1		27.1	332	47.8		31.0	77	23.5		54.8						
14	104	59.9	350	54.8		37.3	63	23.8		27.7	347	49.8		30.9	92	25.8		54.8						
15	120	02.4	5	54.1		36.9	78	24.4		28.2	2	51.7		30.8	107	28.0		54.9						
16	135	04.8	20	53.4		36.4	93	25.1		28.8	17	53.7		30.7	122	30.3		55.0						
17	150	07.3	35	52.7	+23	36.0	108	25.7	+15	29.4	32	55.6	+21	30.6	137	32.6	+2	55.0						
18	165	09.8	50	52.0	+23	35.5	123	26.4	+15	29.9	47	57.6	+21	30.5	152	34.9	+2	55.1						
19	180	12.2	65	51.4		35.1	138	27.0		30.5	62	59.5		30.4	167	37.2		55.2						
20	195	14.7	80	50.7		34.6	153	27.7		31.1	78	01.4		30.4	182	39.4		55.2						
21	210	17.2	95	50.0		34.1	168	28.3		31.6	93	03.4		30.3	197	41.7		55.3						
22	225	19.6	110	49.3		33.7	183	29.0		32.2	108	05.3		30.2	212	44.0		55.4						
23	240	22.1	125	48.6		33.2	198	29.6		32.8	123	07.3		30.1	227	46.3		55.4						
24	255	24.6	140	47.9	+23	32.8	213	30.3	+15	33.4	138	09.2	+21	30.0	242	48.6	+2	55.5						
Dif	—			-7			-4			+6			+19			-1			+23			+1		

UT	SOL		LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 58.9 ^m		Edad: 21.2 ^d SD: 15'2 PMG: 5 ^h 15 ^m		PHE { 4 ^h : 55'9 12 ^h : 56'1 20 ^h : 56'4 Rº: 45 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil			Náutico	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	18.4	+22	43.9	283	34.2	-11	52.5	60 N	21 17	22 50	** **	0 32	1	10 15	91
1	195	18.3		44.1	298	07.8		38.9	58	20 58	22 09	** **	25 5		21 87	
2	210	18.1		44.4	312	41.4		25.3	56	42	21 42	** **	19 8		26 84	
3	225	18.0		44.6	327	15.1	-11	11.6	54	28	21 21	22 56	14 10		30 81	
4	240	17.9		44.9	341	48.7	-10	57.9	52	16	21 04	22 18	09 13		34 79	
5	255	17.8	+22	45.1	356	22.4	-10	44.1	50	20 06	20 50	21 53	0 05	15	10 38	76
6	270	17.7	+22	45.3	10	56.1	-10	30.2	45	19 44	20 21	21 10	** **	** **	10 46	70
7	285	17.6		45.6	25	29.8		16.3	40	27	19 59	20 40	** **	** **	52 67	
8	300	17.4		45.8	40	03.5	-10	02.4	35	19 12	42	18	** **	** **	10 58	63
9	315	17.3		46.1	54	37.2	-9	48.3	30	18 59	27	20 00	** **	** **	11 03	59
10	330	17.2		46.3	69	10.9		34.3	20	38	19 02	19 32	23 57	36	11 54	
11	345	17.1	+22	46.5	83	44.7	-9	20.1	10 N	18 20	18 43	19 10	23 52	41	11 19	49
12	0	17.0	+22	46.8	98	18.4	-9	06.0	0	18 03	18 25	18 51	23 48	45	11 25	45
13	15	16.9		47.0	112	52.2	-8	51.7	10 S	17 46	18 08	35	43 50		32 40	
14	30	16.7		47.2	127	26.0		37.4	20	28	17 52	19	38 55		39 36	
15	45	16.6		47.5	141	59.7		23.1	30	17 07	33	18 03	33 60		47 30	
16	60	16.5		47.7	156	33.5	-8	08.7	35	16 55	23	17 55	30 63		52 27	
17	75	16.4	+22	48.0	171	07.3	-7	54.3	40	16 41	17 12	17 46	23 26	67	11 57	24
18	90	16.3	+22	48.2	185	41.1	-7	39.8	45	16 25	16 59	17 36	23 22	71	12 03	20
19	105	16.1		48.4	200	14.8		25.3	50	16 05	43	24	17 76		10 15	
20	120	16.0		48.6	214	48.6	-7	10.7	52	15 56	36	19	14 79		13 13	
21	135	15.9		48.9	229	22.4	-6	56.0	54	45	28	14	12 81		17 10	
22	150	15.8		49.1	243	56.2		41.4	56	33	19	08	09 85		21 7	
23	165	15.7		49.3	258	29.9		26.7	58	19	16 10	17 02	06 88		25 5	
24	180	15.5	+22	49.6	273	03.7	-6	11.9	60 S	15 02	15 59	16 55	23 02	92	12 30	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 57.2 ^m		Mag: -4.0 PMG: 14 ^h 37 ^m		Mag: +1.4 PMG: 9 ^h 46 ^m		Mag: -1.9 PMG: 14 ^h 45 ^m		Mag: +0.9 PMG: 7 ^h 48 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	255	24.6	140	47.9	+23	32.8	213	30.3	+15	33.4
1	270	27.0	155	47.2		32.3	228	30.9		33.9
2	285	29.5	170	46.5		31.8	243	31.6		34.5
3	300	31.9	185	45.8		31.4	258	32.2		35.1
4	315	34.4	200	45.1		30.9	273	32.9		35.6
5	330	36.9	215	44.4	+23	30.4	288	33.5	+15	36.2
6	345	39.3	230	43.7	+23	30.0	303	34.2	+15	36.8
7	0	41.8	245	43.0		29.5	318	34.8		37.3
8	15	44.3	260	42.3		29.0	333	35.5		37.9
9	30	46.7	275	41.6		28.5	348	36.1		38.5
10	45	49.2	290	41.0		28.1	3	36.8		39.0
11	60	51.7	305	40.3	+23	27.6	18	37.4	+15	39.6
12	75	54.1	320	39.6	+23	27.1	33	38.1	+15	40.2
13	90	56.6	335	38.9		26.6	48	38.7		40.7
14	105	59.1	350	38.2		26.2	63	39.3		41.3
15	121	01.5	5	37.5		25.7	78	40.0		41.9
16	136	04.0	20	36.8		25.2	93	40.6		42.4
17	151	06.4	35	36.2	+23	24.7	108	41.3	+15	43.0
18	166	08.9	50	35.5	+23	24.3	123	41.9	+15	43.6
19	181	11.4	65	34.8		23.8	138	42.6		44.1
20	196	13.8	80	34.1		23.3	153	43.2		44.7
21	211	16.3	95	33.4		22.8	168	43.9		45.2
22	226	18.8	110	32.7		22.3	183	44.5		45.8
23	241	21.2	125	32.0		21.8	198	45.2		46.4
24	256	23.7	140	31.4	+23	21.3	213	45.8	+15	46.9
Dif	—		-7		-5		+6		+6	
							+19		-1	
									+23	
									+1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 59.1 ^m			Edad: 22.2 ^d SD: 15 ^h 4 PMG: 5 ^h 58 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	15.5	+22 49.6	273	03.7	-6 11.9	60 N	** **	1 07	2 41	0 32	0	11 45 91	
1	195	15.4	49.8	287	37.5	-5 57.1	58	** **	1 49	3 00	29	3	47 87	
2	210	15.3	50.0	302	11.2	42.3	56	** **	2 16	16	26	6	48 85	
3	225	15.2	50.2	316	45.0	27.4	54	1 01	37	30	23	9	50 81	
4	240	15.1	50.5	331	18.7	-5 12.4	52	1 40	2 54	41	21	11	51 79	
5	255	14.9	+22 50.7	345	52.4	-4 57.5	50	2 05	3 08	3 52	0 18	14	11 52 77	
6	270	14.8	+22 50.9	0	26.1	-4 42.5	45	2 48	3 37	4 14	0 14	18	11 55 71	
7	285	14.7	51.1	14	59.8	27.4	40	3 17	3 59	31	09	23	57 67	
8	300	14.6	51.4	29	33.5	-4 12.4	35	40	4 16	46	06	26	11 59 63	
9	315	14.5	51.6	44	07.2	-3 57.2	30	3 58	31	4 58	0 03	29	12 01 59	
10	330	14.3	51.8	58	40.8	42.1	20	4 26	4 55	5 20	** **	**	04 54	
11	345	14.2	+22 52.0	73	14.5	-3 26.9	10 N	4 48	5 15	5 38	** **	**	12 06 49	
12	0	14.1	+22 52.3	87	48.1	-3 11.7	0	5 07	5 33	5 55	** **	**	12 09 44	
13	15	14.0	52.5	102	21.7	-2 56.4	10 S	23	5 50	6 12	** **	**	11 39	
14	30	13.9	52.7	116	55.2	41.2	20	39	6 06	30	** **	**	13 35	
15	45	13.7	52.9	131	28.8	25.9	30	5 55	25	6 51	** **	**	16 29	
16	60	13.6	53.1	146	02.3	-2 10.5	35	6 04	35	7 03	** **	**	17 26	
17	75	13.5	+22 53.3	160	35.8	-1 55.1	40	6 13	6 46	7 17	** **	**	12 19 22	
18	90	13.4	+22 53.6	175	09.3	-1 39.7	45	6 23	7 00	7 33	** **	**	12 21 18	
19	105	13.3	53.8	189	42.7	24.3	50	34	15	7 53	** **	**	23 14	
20	120	13.1	54.0	204	16.1	-1 08.9	52	39	22	8 03	** **	**	25 11	
21	135	13.0	54.2	218	49.5	-0 53.4	54	44	30	13	** **	**	26 8	
22	150	12.9	54.4	233	22.8	37.9	56	50	39	26	** **	**	27 6	
23	165	12.8	54.6	247	56.1	22.4	58	6 57	7 49	40	** **	**	28 3	
24	180	12.7	+22 54.8	262	29.4	-0 06.8	60 S	7 04	8 00	8 56	** **	**	12 30 0	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 6 ^h 53.3 ^m		Mag: -4.0 PMG: 14 ^h 39 ^m		Mag: +1.4 PMG: 9 ^h 45 ^m		Mag: -1.9 PMG: 14 ^h 42 ^m		Mag: +0.9 PMG: 7 ^h 44 ^m	
	hG ♈	Dec	hG ♊	Dec	hG ♊	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	256	23.7	140 31.4	+23 21.3	213 45.8	+15 46.9	138 55.9	+21 27.9	243 43.4	+2 57.1
1	271	26.2	155 30.7	20.8	228 46.5	47.5	153 57.9	27.8	258 45.7	57.1
2	286	28.6	170 30.0	20.4	243 47.1	48.1	168 59.8	27.7	273 48.0	57.2
3	301	31.1	185 29.3	19.9	258 47.8	48.6	184 01.8	27.7	288 50.2	57.3
4	316	33.6	200 28.6	19.4	273 48.4	49.2	199 03.7	27.6	303 52.5	57.3
5	331	36.0	215 28.0	+23 18.9	288 49.1	+15 49.7	214 05.7	+21 27.5	318 54.8	+2 57.4
6	346	38.5	230 27.3	+23 18.4	303 49.7	+15 50.3	229 07.6	+21 27.4	333 57.1	+2 57.5
7	1	40.9	245 26.6	17.9	318 50.3	50.9	244 09.6	27.3	348 59.4	57.5
8	16	43.4	260 25.9	17.4	333 51.0	51.4	259 11.5	27.2	4 01.7	57.6
9	31	45.9	275 25.3	16.9	348 51.6	52.0	274 13.4	27.1	19 04.0	57.7
10	46	48.3	290 24.6	16.4	3 52.3	52.5	289 15.4	27.0	34 06.2	57.7
11	61	50.8	305 23.9	+23 15.9	18 52.9	+15 53.1	304 17.3	+21 26.9	49 08.5	+2 57.8
12	76	53.3	320 23.2	+23 15.4	33 53.6	+15 53.7	319 19.3	+21 26.9	64 10.8	+2 57.9
13	91	55.7	335 22.6	14.9	48 54.2	54.2	334 21.2	26.8	79 13.1	57.9
14	106	58.2	350 21.9	14.4	63 54.9	54.8	349 23.2	26.7	94 15.4	58.0
15	122	00.7	5 21.2	13.9	78 55.5	55.3	4 25.1	26.6	109 17.7	58.1
16	137	03.1	20 20.5	13.4	93 56.2	55.9	19 27.1	26.5	124 20.0	58.1
17	152	05.6	35 19.9	+23 12.9	108 56.8	+15 56.4	34 29.0	+21 26.4	139 22.3	+2 58.2
18	167	08.0	50 19.2	+23 12.4	123 57.5	+15 57.0	49 30.9	+21 26.3	154 24.5	+2 58.2
19	182	10.5	65 18.5	11.9	138 58.1	57.6	64 32.9	26.2	169 26.8	58.3
20	197	13.0	80 17.9	11.3	153 58.7	58.1	79 34.8	26.1	184 29.1	58.4
21	212	15.4	95 17.2	10.8	168 59.4	58.7	94 36.8	26.1	199 31.4	58.4
22	227	17.9	110 16.5	10.3	184 00.0	59.2	109 38.7	26.0	214 33.7	58.5
23	242	20.4	125 15.8	09.8	199 00.7	+15 59.8	124 40.7	25.9	229 36.0	58.6
24	257	22.8	140 15.2	+23 09.3	214 01.3	+16 00.3	139 42.6	+21 25.8	244 38.3	+2 58.6
Dif	—		-7	-5	+6	+6	+19	-1	+23	+1

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 59.3 ^m				Edad: 23.2 ^d SD: 15'6 PMG: 6 ^h 42 ^m PHE { 4 ^h : 57'5 12 ^h : 57'8 20 ^h : 58'1 R ^o : 47 ^m																
	hG ☉	Dec			hG ☾	Dif			Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'		°	'		°	'		°	'	h	m	h	m	h	m	m	h	m	m
0	180	12.7		+22	54.8		262	29.4		-0	06.8	60 N	21 19	22 56	** **	0	32	1	13	16	98
1	195	12.5			55.0		277	02.6	142	+0	08.7	58	21 00	22 12	** **		32	5		14	94
2	210	12.4			55.3		291	35.8	142		24.3	56	20 44	21 45	** **		32	7		13	90
3	225	12.3			55.5		306	08.9	141		39.9	54	30	23	23 01		32	10		11	87
4	240	12.2			55.7		320	42.0	141	+0	55.5	52	18	21 06	22 21		32	13		10	84
5	255	12.0	+22		55.9		335	15.1	141	+1	11.1	50	20 07	20 51	21 55	0	32	15	13	09	81
6	270	11.9	+22		56.1		349	48.1	140	+1	26.8	45	19 45	20 22	21 11	0	32	20	13	06	76
7	285	11.8			56.3	4	21.1	140			42.5	40	28	20 00	20 42		32	24		04	71
8	300	11.7			56.5	18	54.0	139		+1	58.1	35	13	19 43	19		32	28		02	67
9	315	11.5			56.7	33	26.9	139		+2	13.8	30	19 00	28	20 01		32	31	13	00	64
10	330	11.4			56.9	47	59.7	138			29.5	20	18 39	19 03	19 32		31	37	12	58	57
11	345	11.3	+22		57.1	62	32.5	138		+2	45.2	10 N	18 20	18 43	19 10	0	31	42	12	55	53
12	0	11.2	+22		57.3	77	05.2	137		+3	01.0	0	18 03	18 25	18 52	0	31	47	12	53	48
13	15	11.1			57.5	91	37.9	137			16.7	10 S	17 46	18 09	35		32	51		50	43
14	30	10.9			57.7	106	10.5	136			32.4	20	28	17 52	19		32	56		48	38
15	45	10.8			57.9	120	43.1	136		+3	48.2	30	17 07	33	18 03		32	62	45	32	
16	60	10.7			58.1	135	15.6	135		+4	03.9	35	16 55	23	17 54		32	65	43	29	
17	75	10.6	+22		58.3	149	48.0	134		+4	19.6	40	16 41	17 11	17 45	0	32	69	12	41	26
18	90	10.4	+22		58.5	164	20.4	134		+4	35.4	45	16 25	16 58	17 35	0	32	74	12	39	21
19	105	10.3			58.7	178	52.7	133		+4	51.1	50	16 04	43	24		32	79		37	16
20	120	10.2			58.9	193	24.9	132		+5	06.9	52	15 55	35	19		32	82		36	13
21	135	10.1			59.1	207	57.1	132			22.6	54	44	27	13		32	85		34	11
22	150	09.9			59.3	222	29.2	131			38.4	56	32	19	07		32	88		33	8
23	165	09.8			59.5	237	01.3	131		+5	54.1	58	18	16 09	17 01		32	91		31	5
24	180	09.7	+22		59.7	251	33.2	129		+6	09.8	60 S	15 01	15 57	16 54	0	32	95	12	30	1
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG: 6 ^h 49.4 ^m		Mag: -4.0 PMG: 14 ^h 40 ^m				Mag: +1.3 PMG: 9 ^h 43 ^m				Mag: -1.9 PMG: 14 ^h 39 ^m				Mag: +0.9 PMG: 7 ^h 40 ^m						
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec				
h	°	'	°	'		°	'	'		°	'	°	'		°	'		°	'		'
0	257	22.8	140	15.2	+23	09.3	214	01.3	+16	00.3	139	42.6	+21	25.8	244	38.3	+0		58.6		
1	272	25.3	155	14.5		08.8	229	02.0		00.9	154	44.5		25.7	259	40.6			58.7		
2	287	27.8	170	13.8		08.3	244	02.6		01.5	169	46.5		25.6	274	42.8			58.8		
3	302	30.2	185	13.2		07.7	259	03.3		02.0	184	48.4		25.5	289	45.1			58.8		
4	317	32.7	200	12.5		07.2	274	03.9		02.6	199	50.4		25.4	304	47.4			58.9		
5	332	35.2	215	11.8	+23	06.7	289	04.5	+16	03.1	214	52.3	+21	25.3	319	49.7	+2		58.9		
6	347	37.6	230	11.2	+23	06.2	304	05.2	+16	03.7	229	54.2	+21	25.3	334	52.0	+2		59.0		
7	2	40.1	245	10.5		05.7	319	05.8		04.2	244	56.2		25.2	349	54.3			59.1		
8	17	42.5	260	09.8		05.1	334	06.5		04.8	259	58.1		25.1	4	56.6			59.1		
9	32	45.0	275	09.2		04.6	349	07.1		05.3	275	00.1		25.0	19	58.9			59.2		
10	47	47.5	290	08.5		04.1	4	07.8		05.9	290	02.0		24.9	35	01.2			59.3		
11	62	49.9	305	07.9	+23	03.6	19	08.4	+16	06.4	305	04.0	+21	24.8	50	03.5	+2		59.3		
12	77	52.4	320	07.2	+23	03.0	34	09.1	+16	07.0	320	05.9	+21	24.7	65	05.7	+2		59.4		
13	92	54.9	335	06.5		02.5	49	09.7		07.5	335	07.8		24.6	80	08.0			59.4		
14	107	57.3	350	05.9		02.0	64	10.3		08.1	350	09.8		24.5	95	10.3			59.5		
15	122	59.8	5	05.2		01.4	79	11.0		08.6	5	11.7		24.4	110	12.6			59.6		
16	138	02.3	20	04.6		00.9	94	11.6		09.2	20	13.7		24.4	125	14.9			59.6		
17	153	04.7	35	03.9	+23	00.4	109	12.3	+16	09.7	35	15.6	+21	24.3	140	17.2	+2		59.7		
18	168	07.2	50	03.2	+22	59.9	124	12.9	+16	10.3	50	17.5	+21	24.2	155	19.5	+2		59.8		
19	183	09.6	65	02.6		59.3	139	13.6		10.8	65	19.5		24.1	170	21.8			59.8		
20	198	12.1	80	01.9		58.8	154	14.2		11.4	80	21.4		24.0	185	24.1			59.9		
21	213	14.6	95	01.3		58.2	169	14.9		11.9	95	23.4		23.9	200	26.4	+2		59.9		
22	228	17.0	110	00.6		57.7	184	15.5		12.5	110	25.3		23.8	215	28.6	+3		00.0		
23	243	19.5	125	00.0		57.2	199	16.1		13.0	125	27.2		23.7	230	30.9	+3		00.1		
24	258	22.0	139	59.3	+22	56.6	214	16.8	+16	13.6	140	29.2	+21	23.6	245	33.2	+3		00.1		
Dif	—		-7		-5		+6		+6		+19		-1		+23		+				

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 15'8 PMG:11 ^h 59.5 ^m				Edad: 24.2 ^d SD: 15'9 PMG: 7 ^h 28 ^m																					
					PHE { 4 ^h : 58'4 12 ^h : 58'7 20 ^h : 59'0 R°: 49 ^m																					
	hG ☉	Dec			hG ☾	Dif			Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°									
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m								
0	180	09.7	+22	59.7	251	33.2	+6	09.8	158	60 N	1 03	2 39	0 32	0	14	52	104									
1	195	09.6	+22	59.9	266	05.1		25.6	157	58	1 46	2 59	35	5	46	99										
2	210	09.4	+23	00.1	280	37.0		41.3	157	56	2 14	3 15	38	8	41	95										
3	225	09.3		00.3	295	08.7	+6	57.0	157	54	0 57	35	29	41	11	37	99									
4	240	09.2		00.5	309	40.4	+7	12.7	157	52	1 37	2 53	41	43	14	32	88									
5	255	09.1	+23	00.7	324	12.0	+7	28.4	157	50	2 03	3 07	3 51	0 46	15	14	29 84									
6	270	08.9	+23	00.9	338	43.5	+7	44.0	156	45	2 47	3 36	4 13	0 50	22	14	21 78									
7	285	08.8		01.1	353	14.9	+7	59.7	157	40	3 17	3 58	31	55	25	14	74									
8	300	08.7		01.2	7	46.3	+8	15.3	156	35	40	4 16	46	0 58	30	08	70									
9	315	08.6		01.4	22	17.5		30.9	156	30	3 58	31	4 58	1 01	33	14	03 66									
10	330	08.4		01.6	36	48.7	+8	46.5	156	20	4 26	4 55	5 20	07	39	13	54 60									
11	345	08.3	+23	01.8	51	19.8	+9	02.1	156	10 N	4 49	5 16	5 39	1 12	44	13	46 56									
12	0	08.2	+23	02.0	65	50.8	+9	17.6	155	0	5 07	5 33	5 56	1 17	48	13	39 51									
13	15	08.1		02.2	80	21.7		33.1	155	10 S	24	5 50	6 13	22	53	32	46									
14	30	07.9		02.4	94	52.6	+9	48.6	155	20	40	6 07	31	27	58	25	40									
15	45	07.8		02.5	109	23.3	+10	04.1	155	30	5 56	26	6 52	33	64	16	35									
16	60	07.7		02.7	123	53.9		19.5	154	35	6 04	36	7 04	36	68	11	31									
17	75	07.5	+23	02.9	138	24.5	+10	35.0	155	40	6 14	6 47	7 18	1 40	72	13	05 28									
18	90	07.4	+23	03.1	152	54.9	+10	50.3	153	45	6 24	7 01	7 34	1 45	76	12	59 23									
19	105	07.3		03.3	167	25.3	+11	05.7	154	50	35	16	7 55	50	83	51	18									
20	120	07.2		03.5	181	55.5		21.0	153	52	40	24	8 04	53	85	48	14									
21	135	07.0		03.6	196	25.7		36.2	152	54	46	32	15	55	89	44	12									
22	150	06.9		03.8	210	55.7	+11	51.5	153	56	52	40	27	1 59	91	40	8									
23	165	06.8		04.0	225	25.6	+12	06.7	152	58	6 58	7 50	42	2 02	96	35	5									
24	180	06.7	+23	04.2	239	55.5	+12	21.8	151	60 S	7 05	8 02	8 59	2 06	100	12	30 0									
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO														
	PMG: -4.0 6 ^h 45.4 ^m		Mag: -4.0 PMG: 14 ^h 41 ^m			Mag: +1.3 PMG: 9 ^h 42 ^m			Mag: -1.9 PMG: 14 ^h 36 ^m			Mag: +0.8 PMG: 7 ^h 37 ^m														
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec														
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'										
0	258	22.0	139	59.3	+22	56.6	214	16.8	+16	13.6	140	29.2	+21	23.6	245	33.2	+3	00.1								
1	273	24.4	154	58.6		56.1	229	17.4		14.1	155	31.1		23.5	260	35.5		00.2								
2	288	26.9	169	58.0		55.5	244	18.1		14.7	170	33.1		23.5	275	37.8		00.3								
3	303	29.4	184	57.3		55.0	259	18.7		15.2	185	35.0		23.4	290	40.1		00.3								
4	318	31.8	199	56.7		54.5	274	19.4		15.8	200	36.9		23.3	305	42.4		00.4								
5	333	34.3	214	56.0	+22	53.9	289	20.0	+16	16.3	215	38.9	+21	23.2	320	44.7	+3	00.4								
6	348	36.8	229	55.4	+22	53.4	304	20.6	+16	16.9	230	40.8	+21	23.1	335	47.0	+3	00.5								
7	3	39.2	244	54.7		52.8	319	21.3		17.4	245	42.8		23.0	350	49.3		00.6								
8	18	41.7	259	54.1		52.3	334	21.9		18.0	260	44.7		22.9	5	51.6		00.6								
9	33	44.1	274	53.4		51.7	349	22.6		18.5	275	46.6		22.8	20	53.9		00.7								
10	48	46.6	289	52.8		51.2	4	23.2		19.1	290	48.6		22.7	35	56.1		00.8								
11	63	49.1	304	52.1	+22	50.6	19	23.9	+16	19.6	305	50.5	+21	22.6	50	58.4	+3	00.8								
12	78	51.5	319	51.5	+22	50.1	34	24.5	+16	20.2	320	52.5	+21	22.6	66	00.7	+3	00.9								
13	93	54.0	334	50.8		49.5	49	25.1		20.7	335	54.4		22.5	81	03.0		00.9								
14	108	56.5	349	50.2		49.0	64	25.8		21.2	350	56.3		22.4	96	05.3		01.0								
15	123	58.9	4	49.5		48.4	79	26.4		21.8	5	58.3		22.3	111	07.6		01.1								
16	139	01.4	19	48.9		47.8	94	27.1		22.3	21	00.2		22.2	126	09.9		01.1								
17	154	03.9	34	48.3	+22	47.3	109	27.7	+16	22.9	36	02.2	+21	22.1	141	12.2	+3	01.2								
18	169	06.3	49	47.6	+22	46.7	124	28.4	+16	23.4	51	04.1	+21	22.0	156	14.5	+3	01.2								
19	184	08.8	64	47.0		46.2	139	29.0		24.0	66	06.0		21.9	171	16.8		01.3								
20	199	11.3	79	46.3		45.6	154	29.6		24.5	81	08.0		21.8	186	19.1		01.4								
21	214	13.7	94	45.7		45.0	169	30.3		25.0	96	09.9		21.7	201	21.4		01.4								
22	229	16.2	109	45.0		44.5	184	30.9		25.6	111	11.8		21.6	216	23.7		01.5								
23	244	18.6	124	44.4		43.9	199	31.6		26.1	126	13.8		21.5	231	26.0		01.5								
24	259	21.1	139	43.8	+22	43.4	214	32.2	+16	26.7	141	15.7	+21	21.5	246	28.3	+3	01.6								
Dif	—		-6			-6			+6			+5			+19			-1			+23			+1		

UT	SOL		LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /		° /		°	h m	h m	h m	h m m		h m m	
0	180 06.7	+23 04.2	239 55.5	107	+12 21.8	151	60 N	21 22	23 01	** **	0 32 4		16 36 114	
1	195 06.5	04.3	254 25.2	106	+12 21.8	151	58	21 02	22 15	** **	40 8		25 108	
2	210 06.4	04.5	268 54.8	105	+12 51.9	150	56	20 45	21 47	** **	46 12		16 102	
3	225 06.3	04.7	283 24.3	104	+13 06.9	150	54	31	25	23 06	52 15		08 97	
4	240 06.1	04.9	297 53.7	103	+13 36.8	149	52	19	21 08	22 24	0 57 18		16 00 94	
5	255 06.0	+23 05.0	312 23.0	102	+13 51.6	148	50	20 09	20 53	21 57	1 01 22		15 53 91	
6	270 05.9	+23 05.2	326 52.2	100	+14 06.4	148	45	19 47	20 24	21 13	1 12 27		15 39 85	
7	285 05.8	05.4	341 21.2	100	+14 21.2	148	40	29	20 02	20 43	20 32		28 79	
8	300 05.6	05.6	355 50.2	98	+15 35.8	146	35	14	19 44	20	28 35		18 76	
9	315 05.5	05.7	10 19.0	97	+14 50.4	146	30	19 01	29	20 02	34 39		15 09 73	
10	330 05.4	05.9	24 47.7	96	+15 05.0	146	20	18 39	19 04	19 33	46 44		14 54 67	
11	345 05.3	+23 06.1	39 16.3	94	+15 19.5	145	10 N	18 21	18 44	19 11	1 56 49		14 42 61	
12	0 05.1	+23 06.3	53 44.7	94	+15 33.9	144	0	18 03	18 26	18 52	2 05 55		14 30 57	
13	15 05.0	06.4	68 13.1	92	+15 48.2	143	10 S	17 46	18 09	35	15 59		18 52	
14	30 04.9	06.6	82 41.3	91	+16 02.5	143	20	28	17 52	19	25 64		14 05 48	
15	45 04.7	06.8	97 09.4	90	+16 16.7	142	30	17 07	33	18 03	37 70		13 51 42	
16	60 04.6	06.9	111 37.4	88	+16 30.8	141	35	16 55	23	17 54	44 74		42 39	
17	75 04.5	+23 07.1	126 05.2	87	+16 44.9	141	40	16 41	17 11	17 45	2 52 78		13 33 35	
18	90 04.3	+23 07.3	140 32.9	86	+16 58.8	139	45	16 24	16 58	17 35	3 01 83		13 22 30	
19	105 04.2	07.4	155 00.5	84	+17 12.7	139	50	16 04	42	24	13 89		09 24	
20	120 04.1	07.6	169 27.9	84	+17 26.5	138	52	15 54	35	18	18 92		13 02 22	
21	135 04.0	07.7	183 55.3	82	+17 40.2	137	54	43	27	13	24 95		12 56 18	
22	150 03.8	07.9	198 22.5	80	+17 53.8	136	56	31	18	07	30 100		48 14	
23	165 03.7	08.1	212 49.5	80	+18 07.3	135	58	17	16 08	17 00	38 104		40 9	
24	180 03.6	+23 08.2	227 16.5				60 S	15 00	15 56	16 53	3 46 110		12 30 4	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 6 ^h 41.5 ^m		Mag: -4.0 PMG: 14 ^h 42 ^m		Mag: +1.3 PMG: 9 ^h 41 ^m		Mag: -1.8 PMG: 14 ^h 33 ^m		Mag: +0.8 PMG: 7 ^h 33 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /			
0	259 21.1	139 43.8	+22 43.4	214 32.2	+16 26.7	141 15.7	+21 21.5	246 28.3	+3 01.6					
1	274 23.6	154 43.1	42.8	229 32.8	27.2	156 17.7	21.4	261 30.5	01.7					
2	289 26.0	169 42.5	42.2	244 33.5	27.8	171 19.6	21.3	276 32.8	01.7					
3	304 28.5	184 41.8	41.7	259 34.1	28.3	186 21.5	21.2	291 35.1	01.8					
4	319 31.0	199 41.2	41.1	274 34.8	28.8	201 23.5	21.1	306 37.4	01.9					
5	334 33.4	214 40.6	+22 40.5	289 35.4	+16 29.4	216 25.4	+21 21.0	321 39.7	+3 01.9					
6	349 35.9	229 39.9	+22 39.9	304 36.1	+16 29.9	231 27.3	+21 20.9	336 42.0	+3 02.0					
7	4 38.4	244 39.3	39.4	319 36.7	30.5	246 29.3	20.8	351 44.3	02.0					
8	19 40.8	259 38.7	38.8	334 37.3	31.0	261 31.2	20.7	6 46.6	02.1					
9	34 43.3	274 38.0	38.2	349 38.0	31.5	276 33.2	20.6	21 48.9	02.2					
10	49 45.7	289 37.4	37.6	4 38.6	32.1	291 35.1	20.5	36 51.2	02.2					
11	64 48.2	304 36.8	+22 37.1	19 39.3	+16 32.6	306 37.0	+21 20.5	51 53.5	+3 02.3					
12	79 50.7	319 36.1	+22 36.5	34 39.9	+16 33.1	321 39.0	+21 20.4	66 55.8	+3 02.3					
13	94 53.1	334 35.5	35.9	49 40.5	33.7	336 40.9	20.3	81 58.1	02.4					
14	109 55.6	349 34.9	35.3	64 41.2	34.2	351 42.8	20.2	97 00.4	02.5					
15	124 58.1	4 34.2	34.8	79 41.8	34.8	6 44.8	20.1	112 02.7	02.5					
16	140 00.5	19 33.6	34.2	94 42.5	35.3	21 46.7	20.0	127 05.0	02.6					
17	155 03.0	34 33.0	+22 33.6	109 43.1	+16 35.8	36 48.7	+21 19.9	142 07.3	+3 02.6					
18	170 05.5	49 32.3	+22 33.0	124 43.7	+16 36.4	51 50.6	+21 19.8	157 09.6	+3 02.7					
19	185 07.9	64 31.7	32.4	139 44.4	36.9	66 52.5	19.7	172 11.9	02.8					
20	200 10.4	79 31.1	31.8	154 45.0	37.4	81 54.5	19.6	187 14.2	02.8					
21	215 12.9	94 30.4	31.3	169 45.7	38.0	96 56.4	19.5	202 16.5	02.9					
22	230 15.3	109 29.8	30.7	184 46.3	38.5	111 58.3	19.4	217 18.8	02.9					
23	245 17.8	124 29.2	30.1	199 46.9	39.0	127 00.3	19.3	232 21.1	03.0					
24	260 20.2	139 28.6	+22 29.5	214 47.6	+16 39.6	142 02.2	+21 19.3	247 23.3	+3 03.1					
Dif	—	-6	-6	+6	+5	+19	-1	+23	+1					

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'8 PMG:11 ^h 59.9 ^m			Edad: 26.2 ^d PHE { 4 ^h : 60'2 12 ^h : 60'4 20 ^h : 60'7 SD: 16'4 PMG: 9 ^h 12 ^m R°: 60 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m		
0	180	03.6	+23	08.2	227	16.5	+18	07.3	60 N	** **	0 58	2 38	0 34	6	18 28	118		
1	195	03.4		08.4	241	43.3		20.8	58	** **	1 44	2 58	46	12	18 11	108		
2	210	03.3		08.5	256	09.9		34.1	56	** **	2 12	3 14	0 57	16	17 56	102		
3	225	03.2		08.7	270	36.4	+18	47.4	54	0 53	34	28	1 06	21	44	97		
4	240	03.1		08.9	285	02.8	+19	00.5	52	1 35	2 52	40	14	24	33	93		
5	255	02.9	+23	09.0	299	29.1	+19	13.5	50	2 02	3 06	3 51	1 21	28	17 23	90		
6	270	02.8	+23	09.2	313	55.2	+19	26.5	45	2 46	3 36	4 13	1 37	34	17 03	84		
7	285	02.7		09.3	328	21.2		39.3	40	3 16	3 58	31	1 51	37	16 46	80		
8	300	02.5		09.5	342	47.0	+19	52.0	35	39	4 16	45	2 02	41	32	77		
9	315	02.4		09.6	357	12.7	+20	04.6	30	3 58	31	4 58	12	45	20	74		
10	330	02.3		09.8	11	38.3		17.1	20	4 26	4 56	5 20	29	50	16 00	69		
11	345	02.1	+23	10.0	26	03.7	+20	29.5	10 N	4 49	5 16	5 39	2 44	55	15 42	65		
12	0	02.0	+23	10.1	40	29.0	+20	41.8	0	5 08	5 34	5 56	2 58	59	15 25	62		
13	15	01.9		10.3	54	54.2	+20	53.9	10 S	24	5 51	6 13	3 13	63	15 09	58		
14	30	01.7		10.4	69	19.2	+21	05.9	20	40	6 08	32	28	67	14 51	54		
15	45	01.6		10.6	83	44.1		17.8	30	5 57	26	6 53	46	73	31	49		
16	60	01.5		10.7	98	08.8		29.6	35	6 05	37	7 05	3 56	76	20	46		
17	75	01.4	+23	10.9	112	33.4	+21	41.2	40	6 14	6 48	7 19	4 08	80	14 06	43		
18	90	01.2	+23	11.0	126	57.9	+21	52.7	45	6 25	7 02	7 35	4 23	84	13 51	38		
19	105	01.1		11.2	141	22.2	+22	04.0	50	36	18	7 56	40	91	31	33		
20	120	01.0		11.3	155	46.3		15.3	52	41	25	8 06	49	94	22	30		
21	135	00.8		11.4	170	10.4		26.3	54	47	33	17	4 58	98	12	26		
22	150	00.7		11.6	184	34.3		37.3	56	6 53	42	29	5 09	103	13 01	21		
23	165	00.6		11.7	198	58.1		48.1	58	7 00	7 52	8 43	21 109	12 48	15			
24	180	00.4	+23	11.9	213	21.7	+22	58.7	60 S	7 07	8 03	9 01	5 35	117	12 33	7		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 6 ^h 37.6 ^m		Mag: -4.0 PMG: 14 ^h 43 ^m			Mag: +1.3 PMG: 9 ^h 40 ^m			Mag: -1.8 PMG: 14 ^h 30 ^m			Mag: +0.8 PMG: 7 ^h 29 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	260	20.2	139	28.6	+22	29.5	214	47.6	+16	39.6	142	02.2	+21	19.3	247	23.3	+3	03.1
1	275	22.7	154	27.9		28.9	229	48.2		40.1	157	04.1		19.2	262	25.6		03.1
2	290	25.2	169	27.3		28.3	244	48.9		40.7	172	06.1		19.1	277	27.9		03.2
3	305	27.6	184	26.7		27.7	259	49.5		41.2	187	08.0		19.0	292	30.2		03.2
4	320	30.1	199	26.1		27.1	274	50.1		41.7	202	09.9		18.9	307	32.5		03.3
5	335	32.6	214	25.4	+22	26.5	289	50.8	+16	42.3	217	11.9	+21	18.8	322	34.8	+3	03.3
6	350	35.0	229	24.8	+22	25.9	304	51.4	+16	42.8	232	13.8	+21	18.7	337	37.1	+3	03.4
7	5	37.5	244	24.2		25.3	319	52.1		43.3	247	15.7		18.6	352	39.4		03.5
8	20	40.0	259	23.6		24.7	334	52.7		43.9	262	17.7		18.5	7	41.7		03.5
9	35	42.4	274	22.9		24.1	349	53.3		44.4	277	19.6		18.4	22	44.0		03.6
10	50	44.9	289	22.3		23.5	4	54.0		44.9	292	21.6		18.3	37	46.3		03.6
11	65	47.4	304	21.7	+22	22.9	19	54.6	+16	45.4	307	23.5	+21	18.2	52	48.6	+3	03.7
12	80	49.8	319	21.1	+22	22.3	34	55.3	+16	46.0	322	25.4	+21	18.1	67	50.9	+3	03.8
13	95	52.3	334	20.5		21.7	49	55.9		46.5	337	27.4		18.0	82	53.2		03.8
14	110	54.7	349	19.9		21.1	64	56.5		47.0	352	29.3		18.0	97	55.5		03.9
15	125	57.2	4	19.2		20.5	79	57.2		47.6	7	31.2		17.9	112	57.8		03.9
16	140	59.7	19	18.6		19.9	94	57.8		48.1	22	33.2		17.8	128	00.1		04.0
17	156	02.1	34	18.0	+22	19.3	109	58.5	+16	48.6	37	35.1	+21	17.7	143	02.4	+3	04.1
18	171	04.6	49	17.4	+22	18.7	124	59.1	+16	49.2	52	37.0	+21	17.6	158	04.7	+3	04.1
19	186	07.1	64	16.8		18.1	139	59.7		49.7	67	39.0		17.5	173	07.0		04.2
20	201	09.5	79	16.2		17.5	155	00.4		50.2	82	40.9		17.4	188	09.3		04.2
21	216	12.0	94	15.5		16.9	170	01.0		50.7	97	42.8		17.3	203	11.6		04.3
22	231	14.5	109	14.9		16.2	185	01.6		51.3	112	44.8		17.2	218	13.9		04.3
23	246	16.9	124	14.3		15.6	200	02.3		51.8	127	46.7		17.1	233	16.2		04.4
24	261	19.4	139	13.7	+22	15.0	215	02.9	+16	52.3	142	48.6	+21	17.0	248	18.5	+3	04.5
Dif	—		-6		-6		+6		+5		+19		-1		+23		+1	

UT	SOL		● LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG:12 ^h 00.1 ^m		Edad: 27.2 ^d SD: 16'6 PMG: 10 ^h 12 ^m PHE { 4 ^h : 60'9 12 ^h : 61'0 20 ^h : 61'2 Rº: 67 ^m														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	Rº	Hora	Rº	
h	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m	h m m	
0	180 00.4	+23 11.9	213 21.7	45	+22 58.7	105	60 N	21 24	23 06	** **	0 40 15	20 26 104					
1	195 00.3	12.0	227 45.2	43	+23 09.2	104	58	21 03	22 18	** **	0 58 24	19 59 96					
2	210 00.2	12.2	242 08.5	43	19.6	102	56	20 47	21 49	** **	1 13 31	38 91					
3	225 00.0	12.3	256 31.8	41	29.8	100	54	33	27	23 10	27 34	21 88					
4	239 59.9	12.4	270 54.9	39	39.8	99	52	21	21 09	22 26	38 38	19 06 86					
5	254 59.8	+23 12.6	285 17.8	37	+23 49.7	97	50	20 10	20 54	21 59	1 49 41	18 53 84					
6	269 59.6	+23 12.7	299 40.6	36	+23 59.4	96	45	19 48	20 25	21 14	2 11 46	18 27 81					
7	284 59.5	12.9	314 03.3	34	+24 09.0	94	40	30	20 03	20 44	28 50	18 06 78					
8	299 59.4	13.0	328 25.9	34	18.4	92	35	15	19 44	21	43 53	17 49 76					
9	314 59.3	13.1	342 48.3	34	27.6	91	30	19 02	29	20 03	2 57 55	34 75					
10	329 59.1	13.3	357 10.7	31	36.7	88	20	18 40	19 05	19 34	3 19 59	17 09 72					
11	344 59.0	+23 13.4	11 32.8	29	+24 45.5	87	10 N	18 21	18 44	19 11	3 39 62	16 47 70					
12	359 58.9	+23 13.5	25 54.9	29	+24 54.2	86	0	18 04	18 26	18 52	3 57 66	16 27 68					
13	14 58.7	13.7	40 16.8	29	+25 02.8	83	10 S	17 46	18 09	36	4 16 68	16 07 65					
14	29 58.6	13.8	54 38.7	27	11.1	82	20	28	17 52	20	35 72	15 45 64					
15	44 58.5	13.9	69 00.4	26	19.3	80	30	17 07	33	18 03	4 59 76	20 61					
16	59 58.3	14.1	83 22.0	24	27.3	78	35	16 55	23	17 55	5 12 79	15 06 58					
17	74 58.2	+23 14.2	97 43.4	24	+25 35.1	76	40	16 41	17 11	17 45	5 28 81	14 49 56					
18	89 58.1	+23 14.3	112 04.8	22	+25 42.7	74	45	16 24	16 58	17 35	5 47 85	14 29 53					
19	104 57.9	14.5	126 26.0	22	50.1	73	50	16 04	42	23	6 11 90	14 04 48					
20	119 57.8	14.6	140 47.2	20	+25 57.4	70	52	15 54	35	18	23 92	13 52 46					
21	134 57.7	14.7	155 08.2	19	+26 04.4	69	54	43	26	13	36 96	38 43					
22	149 57.5	14.9	169 29.1	19	11.3	66	56	30	17	06	6 52 100	22 39					
23	164 57.4	15.0	183 50.0	17	17.9	65	58	15 16	16 07	17 00	7 10 107	13 03 33					
24	179 57.3	+23 15.1	198 10.7	17	+26 24.4	65	60 S	14 59	15 56	16 52	7 32 118	12 40 22					

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 6 ^h 33.6 ^m	Mag: -4.0 PMG: 14 ^h 44 ^m	Mag: +1.3 PMG: 9 ^h 39 ^m	Mag: -1.8 PMG: 14 ^h 27 ^m	Mag: +0.8 PMG: 7 ^h 26 ^m					
	hG ♈	hG ♀ Dec	hG ♂ Dec	hG ♃ Dec	hG ♄ Dec					
h	° /	° /	° /	° /	° /					
0	261 19.4	139 13.7	+22 15.0	215 02.9	+16 52.3					
1	276 21.9	154 13.1	14.4	230 03.6	52.9					
2	291 24.3	169 12.5	13.8	245 04.2	53.4					
3	306 26.8	184 11.9	13.2	260 04.8	53.9					
4	321 29.2	199 11.3	12.6	275 05.5	54.4					
5	336 31.7	214 10.7	+22 11.9	290 06.1	+16 55.0					
6	351 34.2	229 10.0	+22 11.3	305 06.8	+16 55.5					
7	6 36.6	244 09.4	10.7	320 07.4	56.0					
8	21 39.1	259 08.8	10.1	335 08.0	56.5					
9	36 41.6	274 08.2	09.4	350 08.7	57.1					
10	51 44.0	289 07.6	08.8	5 09.3	57.6					
11	66 46.5	304 07.0	+22 08.2	20 09.9	+16 58.1					
12	81 49.0	319 06.4	+22 07.6	35 10.6	+16 58.6					
13	96 51.4	334 05.8	06.9	50 11.2	59.2					
14	111 53.9	349 05.2	06.3	65 11.9	+16 59.7					
15	126 56.4	4 04.6	05.7	80 12.5	+17 00.2					
16	141 58.8	19 04.0	05.1	95 13.1	00.7					
17	157 01.3	34 03.4	+22 04.4	110 13.8	+17 01.2					
18	172 03.7	49 02.8	+22 03.8	125 14.4	+17 01.8					
19	187 06.2	64 02.2	03.2	140 15.0	02.3					
20	202 08.7	79 01.6	02.5	155 15.7	02.8					
21	217 11.1	94 01.0	01.9	170 16.3	03.3					
22	232 13.6	109 00.4	01.3	185 16.9	03.9					
23	247 16.1	123 59.8	+22 00.6	200 17.6	04.4					
24	262 18.5	138 59.2	+22 00.0	215 18.2	+17 04.9					
Dif	—	-6	-6	+6	+5					

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/7 PMG:12 ^h 00.3 ^m				Edad: 28.2 ^d SD: 16/7 PMG: 11 ^h 17 ^m													
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico	Civil	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	179	57.3	+23	15.1	198	10.7	+26	24.4	60 N	**	**	0 55	2 37	0 54	38	22 08	58	
1	194	57.1		15.2	212	31.3		30.7	58	**	**	1 42	2 57	1 21	46	21 33	62	
2	209	57.0		15.4	226	51.8		36.7	56	**	**	2 11	3 13	1 42	51	21 08	63	
3	224	56.9		15.5	241	12.3		42.6	54	0 50	33	27	2 00	53	20 48	64		
4	239	56.7		15.6	255	32.7		48.2	52	1 34	2 51	40	15	56	31	64		
5	254	56.6	+23	15.7	269	52.9	+26	53.7	50	2 01	3 06	3 50	2 28	57	20 16	65		
6	269	56.5	+23	15.9	284	13.1	+26	58.9	45	2 46	3 35	4 13	2 55	60	19 46	67		
7	284	56.3		16.0	298	33.2	+27	03.9	40	3 16	3 58	31	3 17	62	23	67		
8	299	56.2		16.1	312	53.3		08.7	35	39	4 16	45	35	63	19 04	67		
9	314	56.1		16.2	327	13.2		13.4	30	3 58	31	4 58	3 51	63	18 47	68		
10	329	55.9		16.3	341	33.1		17.7	20	4 27	4 56	5 20	4 17	65	18 20	67		
11	344	55.8	+23	16.5	355	52.9	+27	21.9	10 N	4 49	5 16	5 39	4 40	67	17 56	68		
12	359	55.7	+23	16.6	10	12.7	+27	25.9	0	5 08	5 34	5 57	5 01	68	17 33	68		
13	14	55.5		16.7	24	32.4		29.6	10 S	25	5 51	6 14	23	69	17 11	68		
14	29	55.4		16.8	38	52.0		33.2	20	41	6 08	32	5 46	70	16 47	68		
15	44	55.3		16.9	53	11.6		36.5	30	5 57	27	6 53	6 13	71	19	68		
16	59	55.1		17.0	67	31.2		39.5	35	6 06	38	7 06	29	72	16 03	68		
17	74	55.0	+23	17.2	81	50.7	+27	42.4	40	6 15	6 49	7 20	6 48	72	15 44	67		
18	89	54.8	+23	17.3	96	10.1	+27	45.1	45	6 25	7 03	7 36	7 11	73	15 21	67		
19	104	54.7		17.4	110	29.5		47.5	50	37	19	7 57	40	74	14 51	67		
20	119	54.6		17.5	124	48.9		49.7	52	42	26	8 07	7 54	75	37	66		
21	134	54.4		17.6	139	08.3		51.7	54	48	34	18	8 11	76	20	65		
22	149	54.3		17.7	153	27.6		53.4	56	6 54	43	30	30	78	14 00	64		
23	164	54.2		17.8	167	46.9		55.0	58	7 01	7 53	8 45	8 55	80	13 35	63		
24	179	54.0	+23	17.9	182	06.2	+27	56.3	60 S	7 08	8 05	9 02	9 29	83	13 01	60		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 29.7 ^m		Mag: -4.0 PMG: 14 ^h 45 ^m				Mag: +1.3 PMG: 9 ^h 38 ^m				Mag: -1.8 PMG: 14 ^h 24 ^m				Mag: +0.8 PMG: 7 ^h 22 ^m			
	hG ♀		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	262	18.5	138	59.2	+22	00.0	215	18.2	+17	04.9	143	35.0	+21	14.8	249	13.8	+3	05.8
1	277	21.0	153	58.6	+21	59.3	230	18.9		05.4	158	36.9		14.7	264	16.1		05.9
2	292	23.5	168	58.0		58.7	245	19.5		05.9	173	38.9		14.6	279	18.4		06.0
3	307	25.9	183	57.4		58.1	260	20.1		06.5	188	40.8		14.5	294	20.7		06.0
4	322	28.4	198	56.8		57.4	275	20.8		07.0	203	42.7		14.4	309	23.0		06.1
5	337	30.8	213	56.2	+21	56.8	290	21.4	+17	07.5	218	44.7	+21	14.3	324	25.3	+3	06.1
6	352	33.3	228	55.6	+21	56.1	305	22.0	+17	08.0	233	46.6	+21	14.2	339	27.6	+3	06.2
7	7	35.8	243	55.0		55.5	320	22.7		08.5	248	48.5		14.1	354	29.9		06.2
8	22	38.2	258	54.5		54.8	335	23.3		09.0	263	50.4		14.0	9	32.2		06.3
9	37	40.7	273	53.9		54.2	350	23.9		09.6	278	52.4		13.9	24	34.5		06.3
10	52	43.2	288	53.3		53.5	5	24.6		10.1	293	54.3		13.8	39	36.8		06.4
11	67	45.6	303	52.7	+21	52.9	20	25.2	+17	10.6	308	56.2	+21	13.7	54	39.1	+3	06.5
12	82	48.1	318	52.1	+21	52.2	35	25.9	+17	11.1	323	58.2	+21	13.6	69	41.4	+3	06.5
13	97	50.6	333	51.5		51.6	50	26.5		11.6	339	00.1		13.5	84	43.7		06.6
14	112	53.0	348	50.9		50.9	65	27.1		12.2	354	02.0		13.4	99	46.0		06.6
15	127	55.5	3	50.3		50.3	80	27.8		12.7	9	04.0		13.3	114	48.3		06.7
16	142	58.0	18	49.7		49.6	95	28.4		13.2	24	05.9		13.2	129	50.6		06.7
17	158	00.4	33	49.2	+21	49.0	110	29.0	+17	13.7	39	07.8	+21	13.2	144	52.9	+3	06.8
18	173	02.9	48	48.6	+21	48.3	125	29.7	+17	14.2	54	09.7	+21	13.1	159	55.2	+3	06.9
19	188	05.3	63	48.0		47.7	140	30.3		14.7	69	11.7		13.0	174	57.6		06.9
20	203	07.8	78	47.4		47.0	155	30.9		15.2	84	13.6		12.9	189	59.9		07.0
21	218	10.3	93	46.8		46.4	170	31.6		15.8	99	15.5		12.8	205	02.2		07.0
22	233	12.7	108	46.2		45.7	185	32.2		16.3	114	17.5		12.7	220	04.5		07.1
23	248	15.2	123	45.7		45.0	200	32.8		16.8	129	19.4		12.6	235	06.8		07.1
24	263	17.7	138	45.1	+21	44.4	215	33.5	+17	17.3	144	21.3	+21	12.5	250	09.1	+3	07.2
Dif	—		-6		-7		+6		+5		+19		-1		+23		+	

UT	SOL				● LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG:12 ^h 00.5 ^m				Edad: 29.2 ^d PHE { 4 ^h : 61'4 12 ^h : 61'3 20 ^h : 61'3 Rº: 68 ^m														
	hG ☉	Dec			hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	Rº	Hora	Rº
h	° /	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	h m	h m	h m	h m		
0	179	54.0	+23	17.9	182	06.2	2	+27	56.3	10	60 N	21 25	23 09	** **	1 32	87	23 06	23	
1	194	53.9		18.1	196	25.4	3		57.3	9	58	21 05	22 20	** **	2 07	83	22 35	32	
2	209	53.8		18.2	210	44.7	3		58.2	6	56	20 48	21 51	** **	33	81	22 11	38	
3	224	53.6		18.3	225	04.0	3		58.8	4	54		34	28	23 14	2 53	80	21 52	42
4	239	53.5		18.4	239	23.2	2		59.2	2	52		22	21 11	22 28	3 11	78	35	46
5	254	53.4	+23	18.5	253	42.4	2	+27	59.4	0	50	20 11	20 55	22 01	3 25	77	21 21	48	
6	269	53.2	+23	18.6	268	01.7	3	+27	59.4	3	45	19 49	20 26	21 16	3 55	76	20 53	52	
7	284	53.1		18.7	282	20.9	2		59.1	5	40		31	20 03	20 45	4 19	74	30	55
8	299	53.0		18.8	296	40.2	3		58.6	7	35		16	19 45	22	38	73	20 11	58
9	314	52.8		18.9	310	59.5	3		57.9	10	30	19 03		30	20 03	4 54	73	19 55	59
10	329	52.7		19.0	325	18.8	3		56.9	12	20	18 41	19 05	19 34	5 22	72	27	63	
11	344	52.6	+23	19.1	339	38.1	3	+27	55.7	14	10 N	18 22	18 45	19 12	5 47	70	19 04	65	
12	359	52.4	+23	19.2	353	57.5	4	+27	54.3	16	0	18 04	18 27	18 53	6 09	69	18 41	68	
13	14	52.3		19.3	8	16.8	3		52.7	18	10 S	17 47	18 10	36	32	67	18 19	70	
14	29	52.2		19.4	22	36.3	5		50.9	21	20		28	17 52	20	6 56	66	17 55	72
15	44	52.0		19.5	36	55.7	4		48.8	23	30	17 07		34	18 03	7 24	64	27	75
16	59	51.9		19.6	51	15.2	5		46.5	25	35	16 55		23	17 55	7 41	63	17 11	76
17	74	51.7	+23	19.7	65	34.8	6	+27	44.0	27	40	16 41	17 11	17 45	8 00	62	16 51	79	
18	89	51.6	+23	19.8	79	54.4	6	+27	41.3	29	45	16 24	16 58	17 35	8 24	60	16 28	81	
19	104	51.5		19.9	94	14.0	6		38.4	32	50	16 03		42	23	8 54	57	15 58	84
20	119	51.3		20.0	108	33.7	7		35.2	32	52	15 54		34	18	9 09	55	43	86
21	134	51.2		20.1	122	53.5	8		31.8	34	54		42	26	12	27	53	25	90
22	149	51.1		20.2	137	13.3	8		28.2	36	56		30	17	06	9 48	50	15 04	93
23	164	50.9		20.3	151	33.2	9		24.4	38	58	15 15	16 07	17 00	10 15	44	14 38	98	
24	179	50.8	+23	20.4	165	53.1	9	+27	20.4	40	60 S	14 58	15 55	16 52	10 52	35	14 01	108	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG 6 ^h 25.8 ^m		Mag: -4.0 PMG: 14 ^h 46 ^m				Mag: +1.3 PMG: 9 ^h 37 ^m				Mag: -1.8 PMG: 14 ^h 21 ^m				Mag: +0.8 PMG: 7 ^h 18 ^m				
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec			
h	° /		° /	° /			° /	° /			° /	° /			° /	° /			
0	263	17.7	138	45.1	+21	44.4	215	33.5	+17	17.3	144	21.3	+21	12.5	250	09.1	+3	07.2	
1	278	20.1	153	44.5		43.7	230	34.1		17.8	159	23.3		12.4	265	11.4		07.2	
2	293	22.6	168	43.9		43.0	245	34.8		18.3	174	25.2		12.3	280	13.7		07.3	
3	308	25.1	183	43.3		42.4	260	35.4		18.8	189	27.1		12.2	295	16.0		07.3	
4	323	27.5	198	42.8		41.7	275	36.0		19.3	204	29.0		12.1	310	18.3		07.4	
5	338	30.0	213	42.2	+21	41.0	290	36.7	+17	19.9	219	31.0	+21	12.0	325	20.6	+3	07.5	
6	353	32.5	228	41.6	+21	40.4	305	37.3	+17	20.4	234	32.9	+21	11.9	340	22.9	+3	07.5	
7	8	34.9	243	41.0		39.7	320	37.9		20.9	249	34.8		11.8	355	25.2		07.6	
8	23	37.4	258	40.4		39.0	335	38.6		21.4	264	36.8		11.7	10	27.5		07.6	
9	38	39.8	273	39.9		38.4	350	39.2		21.9	279	38.7		11.6	25	29.8		07.7	
10	53	42.3	288	39.3		37.7	5	39.8		22.4	294	40.6		11.5	40	32.2		07.7	
11	68	44.8	303	38.7	+21	37.0	20	40.5	+17	22.9	309	42.5	+21	11.4	55	34.5	+3	07.8	
12	83	47.2	318	38.1	+21	36.4	35	41.1	+17	23.4	324	44.5	+21	11.3	70	36.8	+3	07.8	
13	98	49.7	333	37.6		35.7	50	41.7		23.9	339	46.4		11.2	85	39.1		07.9	
14	113	52.2	348	37.0		35.0	65	42.4		24.4	354	48.3		11.1	100	41.4		08.0	
15	128	54.6	3	36.4		34.3	80	43.0		25.0	9	50.3		11.0	115	43.7		08.0	
16	143	57.1	18	35.9		33.6	95	43.6		25.5	24	52.2		10.9	130	46.0		08.1	
17	158	59.6	33	35.3	+21	33.0	110	44.3	+17	26.0	39	54.1	+21	10.9	145	48.3	+3	08.1	
18	174	02.0	48	34.7	+21	32.3	125	44.9	+17	26.5	54	56.0	+21	10.8	160	50.6	+3	08.2	
19	189	04.5	63	34.2		31.6	140	45.5		27.0	69	58.0		10.7	175	52.9		08.2	
20	204	07.0	78	33.6		30.9	155	46.2		27.5	84	59.9		10.6	190	55.2		08.3	
21	219	09.4	93	33.0		30.2	170	46.8		28.0	100	01.8		10.5	205	57.5		08.3	
22	234	11.9	108	32.4		29.6	185	47.4		28.5	115	03.7		10.4	220	59.9		08.4	
23	249	14.3	123	31.9		28.9	200	48.1		29.0	130	05.7		10.3	236	02.2		08.4	
24	264	16.8	138	31.3	+21	28.2	215	48.7	+17	29.5	145	07.6	+21	10.2	251	04.5	+3	08.5	
Dif	—		-6	-7			+6	+5			+19	-1			+23	+1			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG:12 ^h 00.7 ^m				Edad: 0.9 ^d PHE { 4 ^h : 61'2 12 ^h : 61'0 20 ^h : 60'8 SD: 16 ^h 7 PMG: 13 ^h 32 ^m R°: 62 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°		Hora	R°		
h	° /	° /	° /		° /		°		h m	h m	h m	h m m	h m m			
0	179 50.8	+23 20.4	165 53.1		+27 20.4	43	60 N	0 52	2 36	2 58 113	23 28 8					
1	194 50.7	20.5	180 13.2	11	16.1	44	58	1 41	2 56	3 29 104	23 06 15					
2	209 50.5	20.5	194 33.3	11	11.7	44	56	2 11	3 13	3 52 98	22 48 21					
3	224 50.4	20.6	208 53.5	12	07.0	47	54	0 47	33	27	4 11 94	32 26				
4	239 50.3	20.7	223 13.8	13	+27 02.2	48	52	1 33	2 51	39	27 90	19 29				
5	254 50.1	+23 20.8	237 34.1	13	+26 57.1	51	50	2 00	3 06	3 50	4 41 87	22 08 31				
6	269 50.0	+23 20.9	251 54.6	15	+26 51.8	53	45	2 46	3 35	4 13	5 09 83	21 43 38				
7	284 49.8	21.0	266 15.1	15	46.3	55	40	3 16	3 58	31	31 79	24 41				
8	299 49.7	21.1	280 35.8	17	40.6	57	35	39	4 16	46	5 50 76	21 07 45				
9	314 49.6	21.2	294 56.5	17	34.7	59	30	3 58	31	4 59	6 06 73	20 53 48				
10	329 49.4	21.2	309 17.3	18	28.7	60	20	4 27	4 56	5 21	32 70	28 53				
11	344 49.3	+23 21.3	323 38.3	20	+26 22.4	63	10 N	4 49	5 16	5 40	6 55 67	20 07 57				
12	359 49.2	+23 21.4	337 59.3	20	+26 15.9	65	0	5 08	5 35	5 57	7 16 64	19 47 61				
13	14 49.0	21.5	352 20.5	22	09.2	67	10 S	25	5 52	6 14	7 38 60	27 65				
14	29 48.9	21.6	6 41.7	22	+26 02.4	68	20	41	6 09	33	8 01 57	19 06 68				
15	44 48.8	21.7	21 03.1	24	+25 55.3	71	30	5 58	28	6 54	27 53	18 40 74				
16	59 48.6	21.7	35 24.6	25	48.1	72	35	6 07	38	7 06	8 43 50	26 76				
17	74 48.5	+23 21.8	49 46.2	26	+25 40.7	74	40	6 16	6 50	7 21	9 01 47	18 08 80				
18	89 48.3	+23 21.9	64 07.9	27	+25 33.1	76	45	6 26	7 03	7 37	9 22 44	17 47 84				
19	104 48.2	22.0	78 29.8	29	25.3	78	50	38	20	7 58	9 50 37	21 90				
20	119 48.1	22.1	92 51.7	29	17.3	80	52	43	27	8 08	10 03 35	17 08 93				
21	134 47.9	22.1	107 13.8	31	09.2	81	54	49	35	19	18 32	16 53 97				
22	149 47.8	22.2	121 36.0	32	+25 00.8	84	56	6 55	44	32	36 27	36 101				
23	164 47.7	22.3	135 58.4	34	+24 52.4	84	58	7 02	7 54	8 46	10 58 20	16 14 109				
24	179 47.5	+23 22.4	150 20.8	34	+24 43.7	87	60 S	7 09	8 06	9 04	11 26 11	15 47 118				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 6 ^h 21.8 ^m		Mag: -4.0 PMG: 14 ^h 46 ^m		Mag: +1.3 PMG: 9 ^h 36 ^m		Mag: -1.8 PMG: 14 ^h 18 ^m		Mag: +0.8 PMG: 7 ^h 15 ^m							
	hG ♈	Dec	hG ♊	Dec	hG ♊	Dec	hG ♏	Dec	hG ♎	Dec						
h	° /	° /	° /		° /		° /		° /							
0	264 16.8	138 31.3	+21 28.2	215 48.7	+17 29.5	145 07.6	+21 10.2	251 04.5	+3 08.5							
1	279 19.3	153 30.7	27.5	230 49.3	30.0	160 09.5	10.1	266 06.8	08.5							
2	294 21.7	168 30.2	26.8	245 50.0	30.5	175 11.5	10.0	281 09.1	08.6							
3	309 24.2	183 29.6	26.1	260 50.6	31.0	190 13.4	09.9	296 11.4	08.7							
4	324 26.7	198 29.1	25.4	275 51.2	31.5	205 15.3	09.8	311 13.7	08.7							
5	339 29.1	213 28.5	+21 24.8	290 51.9	+17 32.0	220 17.2	+21 09.7	326 16.0	+3 08.8							
6	354 31.6	228 27.9	+21 24.1	305 52.5	+17 32.5	235 19.2	+21 09.6	341 18.3	+3 08.8							
7	9 34.1	243 27.4	23.4	320 53.1	33.0	250 21.1	09.5	356 20.6	08.9							
8	24 36.5	258 26.8	22.7	335 53.8	33.6	265 23.0	09.4	11 23.0	08.9							
9	39 39.0	273 26.3	22.0	350 54.4	34.1	280 24.9	09.3	26 25.3	09.0							
10	54 41.5	288 25.7	21.3	5 55.0	34.6	295 26.9	09.2	41 27.6	09.0							
11	69 43.9	303 25.1	+21 20.6	20 55.7	+17 35.1	310 28.8	+21 09.1	56 29.9	+3 09.1							
12	84 46.4	318 24.6	+21 19.9	35 56.3	+17 35.6	325 30.7	+21 09.0	71 32.2	+3 09.1							
13	99 48.8	333 24.0	19.2	50 56.9	36.1	340 32.6	08.9	86 34.5	09.2							
14	114 51.3	348 23.5	18.5	65 57.6	36.6	355 34.6	08.8	101 36.8	09.2							
15	129 53.8	3 22.9	17.8	80 58.2	37.1	10 36.5	08.7	116 39.1	09.3							
16	144 56.2	18 22.4	17.1	95 58.8	37.6	25 38.4	08.6	131 41.5	09.3							
17	159 58.7	33 21.8	+21 16.4	110 59.5	+17 38.1	40 40.3	+21 08.5	146 43.8	+3 09.4							
18	175 01.2	48 21.2	+21 15.7	126 00.1	+17 38.6	55 42.3	+21 08.4	161 46.1	+3 09.5							
19	190 03.6	63 20.7	15.0	141 00.7	39.1	70 44.2	08.3	176 48.4	09.5							
20	205 06.1	78 20.1	14.3	156 01.4	39.6	85 46.1	08.2	191 50.7	09.6							
21	220 08.6	93 19.6	13.6	171 02.0	40.1	100 48.1	08.1	206 53.0	09.6							
22	235 11.0	108 19.0	12.9	186 02.6	40.6	115 50.0	08.0	221 55.3	09.7							
23	250 13.5	123 18.5	12.2	201 03.3	41.1	130 51.9	07.9	236 57.6	09.7							
24	265 16.0	138 17.9	+21 11.5	216 03.9	+17 41.6	145 53.8	+21 07.8	251 59.9	+3 09.8							
Dif	—	-6	-7	+6	+5	+19	-1	+23	+1							

UT	SOL				● LUNA						Latitud	Puesta de Sol	Fin del crepúsculo				Salida de Luna			Puesta de Luna		
	SD: 15'7 PMG:12 ^h 00.9 ^m				Edad: 1.9 ^d PHE { 4 ^h : 60'6 12 ^h : 60'4 20 ^h : 60'1 PMG: 14 ^h 34 ^m R°: 58 ^m																	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif							Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	179	47.5	+23	22.4	150	20.8	36	+24	43.7	88	60 N	21 26	23 12	** **	4 51	116	23 36	4				
1	194	47.4		22.4	164	43.4	38		34.9	90	58	21 06	22 22	** **	5 13	107	21 10					
2	209	47.3		22.5	179	06.2	38		25.9	92	56	20 49	21 52	** **	30	102	23 09	14				
3	224	47.1		22.6	193	29.0	40		16.7	93	54	35	30	23 16	45	97	22 58	18				
4	239	47.0		22.7	207	52.0	42	+24	07.4	95	52	23	21 12	22 30	5 57	94	48	21				
5	254	46.8	+23	22.7	222	15.2	42	+23	57.9	97	50	20 12	20 56	22 02	6 08	91	22 39	24				
6	269	46.7	+23	22.8	236	38.4	44	+23	48.2	97	45	19 49	20 27	21 16	6 32	84	22 21	29				
7	284	46.6		22.9	251	01.8	46		38.4	98	40	31	20 04	20 46	6 50	80	22 05	35				
8	299	46.4		22.9	265	25.4	47		28.5	99	35	16	19 46	23	7 06	76	21 52	38				
9	314	46.3		23.0	279	49.1	48		18.4	101	30	19 03	31	20 04	19	73	41	41				
10	329	46.2		23.1	294	12.9	49	+23	08.1	103	20	18 41	19 06	19 35	7 42	68	21	47				
11	344	46.0	+23	23.1	308	36.8	51	+22	57.8	103	10 N	18 22	18 45	19 12	8 02	63	21 04	52				
12	359	45.9	+23	23.2	323	00.9	53	+22	47.2	106	0	18 05	18 27	18 53	8 20	59	20 48	56				
13	14	45.8		23.3	337	25.2	53		36.5	107	10 S	17 47	18 10	36	38	55	32	60				
14	29	45.6		23.3	351	49.5	56		25.7	108	20	29	17 53	20	8 58	50	20 14	65				
15	44	45.5		23.4	6	14.1	56		14.8	109	30	17 07	34	18 04	9 20	45	19 54	71				
16	59	45.3		23.5	20	38.7	56	+22	03.7	111	35	16 55	23	17 55	33	42	42	74				
17	74	45.2	+23	23.5	35	03.5	58	+21	52.4	113	40	16 41	17 11	17 46	9 48	38	19 28	78				
18	89	45.1	+23	23.6	49	28.5	60	+21	41.1	113	45	16 24	16 58	17 35	10 06	33	19 11	84				
19	104	44.9		23.7	63	53.6	61		29.6	115	50	16 03	42	23	27 28		18 51	89				
20	119	44.8		23.7	78	18.8	62		18.0	116	52	15 54	34	18	38 24		41	93				
21	134	44.7		23.8	92	44.2	64	+21	06.3	117	54	42	26	12	10 50	21	30	96				
22	149	44.5		23.8	107	09.7	65	+20	54.4	119	56	30	17	06	11 03	17	17	101				
23	164	44.4		23.9	121	35.3	66		42.5	119	58	15 15	16 07	17 00	18 12		18 03	106				
24	179	44.2	+23	24.0	136	01.1	68	+20	30.4	121	60 S	14 58	15 55	16 52	11 37	5	17 45	113				

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 6 ^h 17.9 ^m			Mag: -4.0 PMG: 14 ^h 47 ^m			Mag: +1.3 PMG: 9 ^h 35 ^m			Mag: -1.8 PMG: 14 ^h 15 ^m			Mag: +0.8 PMG: 7 ^h 11 ^m														
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	265	16.0	138	17.9	+21	11.5	216	03.9	+17	41.6	145	53.8	+21	07.8	251	59.9	+3	09.8									
1	280	18.4	153	17.4		10.8	231	04.5		42.1	160	55.8		07.7	267	02.3		09.8									
2	295	20.9	168	16.8		10.1	246	05.2		42.6	175	57.7		07.6	282	04.6		09.9									
3	310	23.3	183	16.3		09.4	261	05.8		43.1	190	59.6		07.6	297	06.9		09.9									
4	325	25.8	198	15.7		08.6	276	06.4		43.6	206	01.5		07.5	312	09.2		10.0									
5	340	28.3	213	15.2	+21	07.9	291	07.1	+17	44.0	221	03.5	+21	07.4	327	11.5	+3	10.0									
6	355	30.7	228	14.6	+21	07.2	306	07.7	+17	44.5	236	05.4	+21	07.3	342	13.8	+3	10.1									
7	10	33.2	243	14.1		06.5	321	08.3		45.0	251	07.3		07.2	357	16.1		10.1									
8	25	35.7	258	13.6		05.8	336	09.0		45.5	266	09.2		07.1	12	18.5		10.2									
9	40	38.1	273	13.0		05.1	351	09.6		46.0	281	11.2		07.0	27	20.8		10.2									
10	55	40.6	288	12.5		04.4	6	10.2		46.5	296	13.1		06.9	42	23.1		10.3									
11	70	43.1	303	11.9	+21	03.6	21	10.9	+17	47.0	311	15.0	+21	06.8	57	25.4	+3	10.3									
12	85	45.5	318	11.4	+21	02.9	36	11.5	+17	47.5	326	16.9	+21	06.7	72	27.7	+3	10.4									
13	100	48.0	333	10.8		02.2	51	12.1		48.0	341	18.8		06.6	87	30.0		10.4									
14	115	50.5	348	10.3		01.5	66	12.7		48.5	356	20.8		06.5	102	32.3		10.5									
15	130	52.9	3	09.8	+21	00.8	81	13.4		49.0	11	22.7		06.4	117	34.7		10.5									
16	145	55.4	18	09.2	+21	00.0	96	14.0		49.5	26	24.6		06.3	132	37.0		10.6									
17	160	57.8	33	08.7	+20	59.3	111	14.6	+17	50.0	41	26.5	+21	06.2	147	39.3	+3	10.6									
18	176	00.3	48	08.1	+20	58.6	126	15.3	+17	50.5	56	28.5	+21	06.1	162	41.6	+3	10.7									
19	191	02.8	63	07.6		57.9	141	15.9		51.0	71	30.4		06.0	177	43.9		10.7									
20	206	05.2	78	07.1		57.1	156	16.5		51.5	86	32.3		05.9	192	46.2		10.8									
21	221	07.7	93	06.5		56.4	171	17.2		52.0	101	34.2		05.8	207	48.5		10.9									
22	236	10.2	108	06.0		55.7	186	17.8		52.4	116	36.2		05.7	222	50.9		10.9									
23	251	12.6	123	05.5		55.0	201	18.4		52.9	131	38.1		05.6	237	53.2		11.0									
24	266	15.1	138	04.9	+20	54.2	216	19.1	+17	53.4	146	40.0	+21	05.5	252	55.5	+3	11.0									
Dif	—			-5			-7			+6			+5			+19			-1			+23			+		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG:12 ^h 01.2 ^m			Edad: 2.9 ^d PHE { 4 ^h : 59 ^h 9 12 ^h : 59 ^h 6 20 ^h : 59 ^h 3 PMG: 15 ^h 30 ^m R°: 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°	
h	° /	° /		° /		° /		°	h m	h m	h m	h m m		h m m		
0	179 44.2	+23 24.0		136 01.1	70	+20 30.4	122	60 N	** **	0 50	2 36	6 45 106		23 39 1		
1	194 44.1	24.0		150 27.1	70	18.2	123	58	** **	1 40	2 56	6 59 100		30 5		
2	209 44.0	24.1		164 53.1	73	+20 05.9	124	56	** **	2 10	3 13	7 11 95		21 9		
3	224 43.8	24.1		179 19.4	73	+19 53.5	125	54	0 46	33	27	21 92		14 12		
4	239 43.7	24.2		193 45.7	75	41.0	127	52	1 32	2 51	39	30 88		08 14		
5	254 43.6	+23 24.2		208 12.2	77	+19 28.3	127	50	2 00	3 06	3 50	7 38 85		23 02 17		
6	269 43.4	+23 24.3		222 38.9	77	+19 15.6	127	45	2 46	3 35	4 13	7 55 79		22 49 22		
7	284 43.3	24.3		237 05.6	79	+19 02.8	128	40	3 16	3 58	31	8 09 74		38 27		
8	299 43.2	24.4		251 32.5	81	+18 49.9	129	35	3 39	4 16	46	20 71		29 31		
9	314 43.0	24.4		265 59.6	82	36.9	130	30	3 58	31	4 59	31 67		21 34		
10	329 42.9	24.5		280 26.8	83	23.7	132	20	4 27	4 56	5 21	8 48 61		22 07 39		
11	344 42.7	+23 24.6		294 54.1	85	+18 10.5	132	10 N	4 50	5 17	5 40	9 03 57		21 54 45		
12	359 42.6	+23 24.6		309 21.6	85	+17 57.2	133	0	5 09	5 35	5 57	9 17 52		21 43 49		
13	14 42.5	24.6		323 49.1	88	43.9	133	10 S	26	5 52	6 15	31 47		31 54		
14	29 42.3	24.7		338 16.9	88	30.4	135	20	42	6 09	33	9 46 42		18 59		
15	44 42.2	24.7		352 44.7	90	16.8	136	30	5 58	28	6 55	10 03 37		21 03 65		
16	59 42.1	24.8		7 12.7	91	+17 03.2	136	35	6 07	39	7 07	13 33		20 55 68		
17	74 41.9	+23 24.8		21 40.8	93	+16 49.5	137	40	6 17	6 51	7 21	10 24 30		20 45 72		
18	89 41.8	+23 24.9		36 09.1	93	+16 35.7	138	45	6 27	7 04	7 38	10 38 24		20 33 78		
19	104 41.6	24.9		50 37.4	95	21.9	140	50	39	20	7 59	10 54 19		19 83		
20	119 41.5	25.0		65 05.9	97	+16 07.9	140	52	44	28	8 09	11 01 16		12 86		
21	134 41.4	25.0		79 34.6	97	+15 53.9	140	54	50	36	20	09 14		20 05 89		
22	149 41.2	25.1		94 03.3	99	39.9	142	56	6 56	45	32	18 10		19 57 92		
23	164 41.1	25.1		108 32.2	100	25.7	142	58	7 03	7 55	8 47	29 6		47 97		
24	179 41.0	+23 25.1		123 01.2		+15 11.5	142	60 S	7 10	8 07	9 05	11 41 1		19 36 102		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: -4.0 6 ^h 14.0 ^m		Mag: -4.0 PMG: 14 ^h 48 ^m		Mag: +1.3 PMG: 9 ^h 34 ^m		Mag: -1.8 PMG: 14 ^h 12 ^m		Mag: +0.8 PMG: 7 ^h 07 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /						
0	266 15.1	138 04.9	+20 54.2	216 19.1	+17 53.4	146 40.0	+21 05.5	252 55.5	+3 11.0							
1	281 17.6	153 04.4	53.5	231 19.7	53.9	161 41.9	05.4	267 57.8	11.1							
2	296 20.0	168 03.9	52.8	246 20.3	54.4	176 43.9	05.3	283 00.1	11.1							
3	311 22.5	183 03.3	52.0	261 21.0	54.9	191 45.8	05.2	298 02.4	11.2							
4	326 25.0	198 02.8	51.3	276 21.6	55.4	206 47.7	05.1	313 04.8	11.2							
5	341 27.4	213 02.3	+20 50.6	291 22.2	+17 55.9	221 49.6	+21 05.0	328 07.1	+3 11.3							
6	356 29.9	228 01.7	+20 49.8	306 22.8	+17 56.4	236 51.5	+21 04.9	343 09.4	+3 11.3							
7	11 32.3	243 01.2	49.1	321 23.5	56.9	251 53.5	04.8	358 11.7	11.4							
8	26 34.8	258 00.7	48.4	336 24.1	57.3	266 55.4	04.7	13 14.0	11.4							
9	41 37.3	273 00.2	47.6	351 24.7	57.8	281 57.3	04.6	28 16.3	11.5							
10	56 39.7	287 59.6	46.9	6 25.4	58.3	296 59.2	04.5	43 18.7	11.5							
11	71 42.2	302 59.1	+20 46.1	21 26.0	+17 58.8	312 01.2	+21 04.4	58 21.0	+3 11.6							
12	86 44.7	317 58.6	+20 45.4	36 26.6	+17 59.3	327 03.1	+21 04.3	73 23.3	+3 11.6							
13	101 47.1	332 58.1	44.7	51 27.3	+17 59.8	342 05.0	04.2	88 25.6	11.7							
14	116 49.6	347 57.5	43.9	66 27.9	+18 00.3	357 06.9	04.1	103 27.9	11.7							
15	131 52.1	2 57.0	43.2	81 28.5	00.8	12 08.8	04.0	118 30.3	11.8							
16	146 54.5	17 56.5	42.4	96 29.1	01.2	27 10.8	03.9	133 32.6	11.8							
17	161 57.0	32 56.0	+20 41.7	111 29.8	+18 01.7	42 12.7	+21 03.8	148 34.9	+3 11.9							
18	176 59.5	47 55.4	+20 40.9	126 30.4	+18 02.2	57 14.6	+21 03.7	163 37.2	+3 11.9							
19	192 01.9	62 54.9	40.2	141 31.0	02.7	72 16.5	03.6	178 39.5	12.0							
20	207 04.4	77 54.4	39.4	156 31.7	03.2	87 18.5	03.5	193 41.8	12.0							
21	222 06.8	92 53.9	38.7	171 32.3	03.7	102 20.4	03.4	208 44.2	12.1							
22	237 09.3	107 53.4	37.9	186 32.9	04.1	117 22.3	03.3	223 46.5	12.1							
23	252 11.8	122 52.8	37.2	201 33.6	04.6	132 24.2	03.2	238 48.8	12.2							
24	267 14.2	137 52.3	+20 36.4	216 34.2	+18 05.1	147 26.1	+21 03.1	253 51.1	+3 12.2							
Dif	—	-5	-7	+6	+5	+19	-1	+23	+							

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna					
	SD: 15'7 PMG:12 ^h 01.4 ^m				Edad: 3.9 ^d PHE { 4 ^h : 59'0 12 ^h : 58'6 20 ^h : 58'3 Rº: 47 ^m																			
	hG ☉		Dec		hG ☾		Dif		Dec				Dif		Civil		Náutico		Hora Rº		Hora Rº			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m		
0	179	41.0	+23	25.1	123	01.2	+15	11.5	142	11.5	142	60 N	21	27	23	14	**	**	8	31	99	23	40	1
1	194	40.8		25.2	137	30.3	+14	57.3	143	57.3	143	58	21	07	22	23	**	**	39	95		35	5	
2	209	40.7		25.2	151	59.5		43.0	144	43.0	144	56	20	50	21	53	**	**	46	91		30	8	
3	224	40.5		25.3	166	28.9		28.6	145	28.6	145	54		36	30	23	18		53	87		26	1	
4	239	40.4		25.3	180	58.4	+14	14.1	145	14.1	145	52		23	21	12	22	31	8	58	85		22	14
5	254	40.3	+23	25.3	195	28.0	+13	59.6	145	59.6	145	50	20	12	20	57	22	03	9	03	82	23	19	16
6	269	40.1	+23	25.4	209	57.7	+13	45.1	145	45.1	145	45	19	50	20	27	21	17	9	14	77	23	11	21
7	284	40.0		25.4	224	27.5		30.5	146	30.5	146	40		32	20	05	20	46		23	72	05	25	25
8	299	39.9		25.4	238	57.4		15.8	147	15.8	147	35		17	19	47	23		31	68	23	00	28	
9	314	39.7		25.5	253	27.5	+13	01.1	147	01.1	147	30	19	04	31	20	05		38	64	22	55	32	
10	329	39.6		25.5	267	57.6	+12	46.4	147	46.4	147	20	18	42	19	06	19	35	9	49	59	46	38	
11	344	39.4	+23	25.5	282	27.9	+12	31.6	148	31.6	148	10 N	18	23	18	46	19	13	10	00	53	22	39	42
12	359	39.3	+23	25.6	296	58.2	+12	16.8	148	16.8	148	0	18	05	18	28	18	54	10	09	49	22	32	47
13	14	39.2		25.6	311	28.7	+12	01.9	149	01.9	149	10 S	17	48	18	10	37		18	44		25	52	
14	29	39.0		25.6	325	59.3	+11	47.0	149	47.0	149	20		29	17	53	21		28	39		17	57	
15	44	38.9		25.7	340	30.0		32.0	150	32.0	150	30	17	08	34	18	04	40	40	33		08	63	
16	59	38.8		25.7	355	00.8		17.1	149	17.1	149	35	16	55	24	17	55	46	46	30	22	03	66	
17	74	38.6	+23	25.7	9	31.6	+11	02.0	151	02.0	151	40	16	41	17	12	17	46	10	54	26	21	57	70
18	89	38.5	+23	25.7	24	02.6	+10	47.0	150	47.0	150	45	16	24	16	58	17	36	11	02	22	21	51	74
19	104	38.4		25.8	38	33.7		31.9	151	31.9	151	50	16	04	42	24		24	13	16		42	80	
20	119	38.2		25.8	53	04.9		16.8	151	16.8	151	52	15	54	35	18		18	17	15		38	83	
21	134	38.1		25.8	67	36.1	+10	01.6	152	01.6	152	54		43	26	13		13	23	11		34	85	
22	149	37.9		25.9	82	07.5	+9	46.5	151	46.5	151	56		30	17	07		07	28	9		29	89	
23	164	37.8		25.9	96	38.9		31.3	152	31.3	152	58	15	15	16	07	17	00	35	5		24	92	
24	179	37.7	+23	25.9	111	10.5	+9	16.0	153	16.0	153	60 S	14	58	15	55	16	52	11	42	1	21	18	96
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO									
	PMG: 6 ^h 10.0 ^m		Mag: -4.0 PMG: 14 ^h 49 ^m				Mag: +1.3 PMG: 9 ^h 33 ^m				Mag: -1.8 PMG: 14 ^h 08 ^m				Mag: +0.8 PMG: 7 ^h 04 ^m									
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	267	14.2	137	52.3	+20	36.4	216	34.2	+18	05.1	147	26.1	+21	03.1	253	51.1	+3	12.2						
1	282	16.7	152	51.8		35.7	231	34.8		05.6	162	28.1		03.0	268	53.4		12.3						
2	297	19.2	167	51.3		34.9	246	35.4		06.1	177	30.0		02.9	283	55.8		12.3						
3	312	21.6	182	50.8		34.2	261	36.1		06.6	192	31.9		02.8	298	58.1		12.4						
4	327	24.1	197	50.3		33.4	276	36.7		07.0	207	33.8		02.7	314	00.4		12.4						
5	342	26.6	212	49.8	+20	32.7	291	37.3	+18	07.5	222	35.8	+21	02.6	329	02.7	+3	12.5						
6	357	29.0	227	49.2	+20	31.9	306	38.0	+18	08.0	237	37.7	+21	02.5	344	05.0	+3	12.5						
7	12	31.5	242	48.7		31.2	321	38.6		08.5	252	39.6		02.4	359	07.4		12.6						
8	27	33.9	257	48.2		30.4	336	39.2		09.0	267	41.5		02.3	14	09.7		12.6						
9	42	36.4	272	47.7		29.6	351	39.8		09.4	282	43.4		02.2	29	12.0		12.6						
10	57	38.9	287	47.2		28.9	6	40.5		09.9	297	45.4		02.1	44	14.3		12.7						
11	72	41.3	302	46.7	+20	28.1	21	41.1	+18	10.4	312	47.3	+21	02.0	59	16.6	+3	12.7						
12	87	43.8	317	46.2	+20	27.4	36	41.7	+18	10.9	327	49.2	+21	01.9	74	19.0	+3	12.8						
13	102	46.3	332	45.7		26.6	51	42.4		11.4	342	51.1		01.8	89	21.3		12.8						
14	117	48.7	347	45.2		25.8	66	43.0		11.8	357	53.0		01.7	104	23.6		12.9						
15	132	51.2	2	44.7		25.1	81	43.6		12.3	12	55.0		01.6	119	25.9		12.9						
16	147	53.7	17	44.1		24.3	96	44.2		12.8	27	56.9		01.5	134	28.3		13.0						
17	162	56.1	32	43.6	+20	23.5	111	44.9	+18	13.3	42	58.8	+21	01.4	149	30.6	+3	13.0						
18	177	58.6	47	43.1	+20	22.8	126	45.5	+18	13.8	58	00.7	+21	01.3	164	32.9	+3	13.1						
19	193	01.1	62	42.6		22.0	141	46.1		14.2	73	02.6		01.2	179	35.2		13.1						
20	208	03.5	77	42.1		21.2	156	46.8		14.7	88	04.6		01.1	194	37.5		13.2						
21	223	06.0	92	41.6		20.5	171	47.4		15.2	103	06.5		01.0	209	39.9		13.2						
22	238	08.4	107	41.1		19.7	186	48.0		15.7	118	08.4		00.9	224	42.2		13.3						
23	253	10.9	122	40.6		18.9	201	48.6		16.1	133	10.3		00.8	239	44.5		13.3						
24	268	13.4	137	40.1	+20	18.2	216	49.3	+18	16.6	148	12.2	+21	00.7	254	46.8	+3	13.4						
Dif	—		-5		-8		+6		+5		+19		-1		+23									

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG:12 ^h 01.6 ^m			Edad: 4.9 ^d PHE { 4 ^h : 58'0 12 ^h : 57'7 20 ^h : 57'4 R°: 44 ^m PMG: 17 ^h 07 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	37.7	+23	25.9	111	10.5	+9 16.0	60 N	** **	0 49	2 36	10 09	91	23 40	0	0
1	194	37.5		25.9	125	42.1	+9 00.8	58	** **	1 40	2 56	12 88		38 3		
2	209	37.4		25.9	140	13.8	+8 45.5	56	** **	2 10	3 13	16 84		37 6		
3	224	37.3		26.0	154	45.6		54	0 45	33	27	19 81		35 9		
4	239	37.1		26.0	169	17.5	+8 14.9	52	1 32	2 51	40	21 79		34 11		
5	254	37.0	+23	26.0	183	49.5	+7 59.6	50	2 00	3 06	3 50	10 24	76	23 33	13	
6	269	36.8	+23	26.0	198	21.5	+7 44.3	45	2 46	3 36	4 13	10 29	71	23 31	18	
7	284	36.7		26.0	212	53.7		40	3 16	3 58	31	34 66		29 21		
8	299	36.6		26.1	227	25.9	+7 13.6	35	40	4 16	46	37 63		27 25		
9	314	36.4		26.1	241	58.2	+6 58.2	30	3 58	32	4 59	41 59		25 29		
10	329	36.3		26.1	256	30.5		20	4 27	4 57	5 21	46 54		22 34		
11	344	36.2	+23	26.1	271	03.0	+6 27.4	10 N	4 50	5 17	5 40	10 51	49	23 20	39	
12	359	36.0	+23	26.1	285	35.5	+6 12.0	0	5 09	5 35	5 58	10 56	44	23 18	43	
13	14	35.9		26.1	300	08.0	+5 56.6	10 S	26	5 53	6 15	11 01	39	15 48		
14	29	35.7		26.2	314	40.7		20	42	6 10	34	06 35		12 53		
15	44	35.6		26.2	329	13.4		30	5 59	29	6 55	12 29		09 59		
16	59	35.5		26.2	343	46.2	+5 10.3	35	6 08	39	7 08	15 26		08 61		
17	74	35.3	+23	26.2	358	19.0	+4 54.9	40	6 17	6 51	7 22	11 19	22	23 06	65	
18	89	35.2	+23	26.2	12	51.9	+4 39.5	45	6 27	7 05	7 39	11 23	18	23 03	70	
19	104	35.1		26.2	27	24.9		50	39	21	7 59	28 13		23 01	74	
20	119	34.9		26.2	41	57.9	+4 08.6	52	45	28	8 09	30 11		22 59	78	
21	134	34.8		26.2	56	31.0	+3 53.2	54	50	37	20	33 8		58 80		
22	149	34.7		26.2	71	04.2		56	6 56	46	33	36 6		56 83		
23	164	34.5		26.2	85	37.4		58	7 03	7 56	8 48	39 3		55 86		
24	179	34.4	+23	26.3	100	10.6	+3 07.0	60 S	7 11	8 08	9 05	11 42	0	22 53	89	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 6 ^h 06.1 ^m		Mag: -4.0 PMG: 14 ^h 50 ^m		Mag: +1.3 PMG: 9 ^h 32 ^m		Mag: -1.8 PMG: 14 ^h 05 ^m		Mag: +0.8 PMG: 7 ^h 00 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	268	13.4	137	40.1	+20	18.2	216	49.3	+18	16.6	
1	283	15.8	152	39.6		17.4	231	49.9		17.1	
2	298	18.3	167	39.1		16.6	246	50.5		17.6	
3	313	20.8	182	38.6		15.8	261	51.2		18.0	
4	328	23.2	197	38.1		15.1	276	51.8		18.5	
5	343	25.7	212	37.6	+20	14.3	291	52.4	+18	19.0	
6	358	28.2	227	37.1	+20	13.5	306	53.0	+18	19.5	
7	13	30.6	242	36.6		12.7	321	53.7		19.9	
8	28	33.1	257	36.1		11.9	336	54.3		20.4	
9	43	35.6	272	35.6		11.2	351	54.9		20.9	
10	58	38.0	287	35.2		10.4	6	55.6		21.3	
11	73	40.5	302	34.7	+20	09.6	21	56.2	+18	21.8	
12	88	42.9	317	34.2	+20	08.8	36	56.8	+18	22.3	
13	103	45.4	332	33.7		08.0	51	57.4		22.8	
14	118	47.9	347	33.2		07.2	66	58.1		23.2	
15	133	50.3	2	32.7		06.5	81	58.7		23.7	
16	148	52.8	17	32.2		05.7	96	59.3		24.2	
17	163	55.3	32	31.7	+20	04.9	111	59.9	+18	24.6	
18	178	57.7	47	31.2	+20	04.1	127	00.6	+18	25.1	
19	194	00.2	62	30.7		03.3	142	01.2		25.6	
20	209	02.7	77	30.3		02.5	157	01.8		26.1	
21	224	05.1	92	29.8		01.7	172	02.5		26.5	
22	239	07.6	107	29.3		00.9	187	03.1		27.0	
23	254	10.0	122	28.8	+20	00.2	202	03.7		27.5	
24	269	12.5	137	28.3	+19	59.4	217	04.3	+18	27.9	
Dif	—		-5	-8		+6	+5	+19	-1	+23	0

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG:12 ^h 01.8 ^m			Edad: 5.9 ^d SD: 15'6 PMG: 17 ^h 51 ^m PHE 4^h: 57'1 12^h: 56'8 20^h: 56'5 Rº: 43^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	Rº	Hora	Rº
h	°	/	°	/	°	/	°	/	°	h	m	h	m	h	m	h	m
0	179	34.4	+23	26.3	100	10.6	+3	07.0	60 N	21	28	23	15	**	**	11	40
1	194	34.2		26.3	114	43.9	+2	51.6	58	21	07	22	23	**	**	40	86
2	209	34.1		26.3	129	17.3		36.2	56	20	50	21	53	**	**	40	83
3	224	34.0		26.3	143	50.7		20.8	54	36	31	23	19	**	**	40	80
4	239	33.8		26.3	158	24.2	+2	05.4	52	24	21	13	22	31		40	77
5	254	33.7	+23	26.3	172	57.7	+1	50.1	50	20	13	20	58	22	03	11	40
6	269	33.6	+23	26.3	187	31.2	+1	34.7	45	19	50	20	28	21	18	11	40
7	284	33.4		26.3	202	04.8		19.4	40	32	20	05	20	47		40	66
8	299	33.3		26.3	216	38.5	+1	04.1	35	17	19	47		24		40	62
9	314	33.2		26.3	231	12.2	+0	48.8	30	19	04	32	20	05		40	59
10	329	33.0		26.3	245	45.9		33.5	20	18	42	19	07	19	36	40	53
11	344	32.9	+23	26.3	260	19.7	+0	18.2	10 N	18	23	18	46	19	13	11	40
12	359	32.7	+23	26.3	274	53.5	+0	02.9	0	18	06	18	28	18	54	11	40
13	14	32.6		26.3	289	27.3	-0	12.3	10 S	17	48	18	11		37	40	40
14	29	32.5		26.3	304	01.2		27.5	20	29		17	53		21	41	34
15	44	32.3		26.3	318	35.1		42.7	30	17	08	35	18	04		41	29
16	59	32.2		26.3	333	09.0	-0	57.9	35	16	56	24	17	56		41	26
17	74	32.1	+23	26.2	347	43.0	-1	13.0	40	16	42	17	12	17	46	11	41
18	89	31.9	+23	26.2	2	17.0	-1	28.1	45	16	25	16	59	17	36	11	41
19	104	31.8		26.2	16	51.0		43.2	50	16	04	42		24		41	14
20	119	31.7		26.2	31	25.1	-1	58.3	52	15	54	35	19	41	12		41
21	134	31.5		26.2	45	59.2	-2	13.4	54		43	27	13		13	41	10
22	149	31.4		26.2	60	33.3		28.4	56		30	18	07		07	42	7
23	164	31.2		26.2	75	07.4		43.4	58	15	15	16	07	17	00	42	4
24	179	31.1	+23	26.2	89	41.6	-2	58.4	60 S	14	58	15	56	16	53	11	42

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 6 ^h 02.2 ^m		Mag: -4.0 PMG: 14 ^h 51 ^m		Mag: +1.3 PMG: 9 ^h 31 ^m		Mag: -1.8 PMG: 14 ^h 02 ^m		Mag: +0.8 PMG: 6 ^h 56 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	/	°	/	°	/	°	/	°	/
0	269	12.5	137	28.3	+19	59.4	217	04.3	+18	27.9
1	284	15.0	152	27.8		58.6	232	05.0		28.4
2	299	17.4	167	27.3		57.8	247	05.6		28.9
3	314	19.9	182	26.9		57.0	262	06.2		29.3
4	329	22.4	197	26.4		56.2	277	06.8		29.8
5	344	24.8	212	25.9	+19	55.4	292	07.5	+18	30.3
6	359	27.3	227	25.4	+19	54.6	307	08.1	+18	30.7
7	14	29.8	242	24.9		53.8	322	08.7		31.2
8	29	32.2	257	24.5		53.0	337	09.3		31.7
9	44	34.7	272	24.0		52.2	352	10.0		32.1
10	59	37.2	287	23.5		51.4	7	10.6		32.6
11	74	39.6	302	23.0	+19	50.6	22	11.2	+18	33.1
12	89	42.1	317	22.6	+19	49.8	37	11.9	+18	33.5
13	104	44.5	332	22.1		49.0	52	12.5		34.0
14	119	47.0	347	21.6		48.2	67	13.1		34.4
15	134	49.5	2	21.1		47.4	82	13.7		34.9
16	149	51.9	17	20.7		46.6	97	14.4		35.4
17	164	54.4	32	20.2	+19	45.7	112	15.0	+18	35.8
18	179	56.9	47	19.7	+19	44.9	127	15.6	+18	36.3
19	194	59.3	62	19.3		44.1	142	16.2		36.8
20	210	01.8	77	18.8		43.3	157	16.9		37.2
21	225	04.3	92	18.3		42.5	172	17.5		37.7
22	240	06.7	107	17.8		41.7	187	18.1		38.1
23	255	09.2	122	17.4		40.9	202	18.7		38.6
24	270	11.7	137	16.9	+19	40.1	217	19.4	+18	39.1
Dif	—		-5		-8		+6		+5	
									+19	
									-1	
										+23

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG:12 ^h 02.0 ^m				Edad: 6.9 ^d SD: 15 ^h 4 PMG: 18 ^h 33 ^m												
	hG ☉ Dec				hG ☾ Dif Dec Dif					Náutico Civil			Hora R°		Hora R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	31.1	+23	26.2	89	41.6	-2	58.4	60 N	**	**	0	49	2	36	13	08
1	194	31.0		26.2	104	15.7	-3	13.3	58	**	**	1	41	2	57	04	84
2	209	30.8		26.2	118	49.9		28.2	56	**	**	2	11	3	13	13	01
3	224	30.7		26.2	133	24.1		43.1	54	0	45	33		28	12	58	78
4	239	30.6		26.1	147	58.4	-3	57.9	52	1	33	2	51	40	56	75	56
5	254	30.4	+23	26.1	162	32.6	-4	12.7	50	2	01	3	06	3	51	12	54
6	269	30.3	+23	26.1	177	06.9	-4	27.5	45	2	46	3	36	4	13	12	48
7	284	30.2		26.1	191	41.1		42.2	40	3	17	3	59	32	44	63	**
8	299	30.0		26.1	206	15.4	-4	56.9	35	40	4	17	4	47	41	59	**
9	314	29.9		26.1	220	49.7	-5	11.6	30	3	59	32	5	00	38	56	**
10	329	29.7		26.0	235	24.0		26.2	20	4	28	4	57	22	32	51	**
11	344	29.6	+23	26.0	249	58.3	-5	40.8	10 N	4	51	5	18	5	41	12	27
12	359	29.5	+23	26.0	264	32.6	-5	55.4	0	5	10	5	36	5	58	12	23
13	14	29.3		26.0	279	07.0	-6	09.9	10 S	27	5	53	6	16	19	38	03
14	29	29.2		26.0	293	41.3		24.4	20	43	6	10	34	14	34	05	52
15	44	29.1		25.9	308	15.6		38.8	30	5	59	29	6	56	09	28	08
16	59	28.9		25.9	322	50.0	-6	53.2	35	6	08	40	7	08	06	25	09
17	74	28.8	+23	25.9	337	24.3	-7	07.6	40	6	18	6	52	7	22	12	02
18	89	28.7	+23	25.9	351	58.6	-7	21.9	45	6	28	7	05	7	39	11	59
19	104	28.5		25.8	6	33.0		36.1	50	40	21	8	00	54	14	15	73
20	119	28.4		25.8	21	07.3	-7	50.3	52	45	29	10	52	11	17	75	
21	134	28.3		25.8	35	41.6	-8	04.5	54	51	37	21	50	9	18	78	
22	149	28.1		25.8	50	15.9		18.6	56	6	57	46	34	47	6	19	81
23	164	28.0		25.7	64	50.2		32.7	58	7	04	7	56	8	48	44	4
24	179	27.8	+23	25.7	79	24.6	-8	46.8	60 S	7	11	8	08	9	06	11	41

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 58.2 ^m		Mag: -4.0 PMG: 14 ^h 51 ^m		Mag: +1.3 PMG: 9 ^h 30 ^m		Mag: -1.8 PMG: 13 ^h 59 ^m		Mag: +0.8 PMG: 6 ^h 52 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	270	11.7	137	16.9	+19	40.1	217	19.4	+18	39.1
1	285	14.1	152	16.4		39.3	232	20.0		39.5
2	300	16.6	167	16.0		38.4	247	20.6		40.0
3	315	19.0	182	15.5		37.6	262	21.2		40.4
4	330	21.5	197	15.1		36.8	277	21.9		40.9
5	345	24.0	212	14.6	+19	36.0	292	22.5	+18	41.4
6	0	26.4	227	14.1	+19	35.2	307	23.1	+18	41.8
7	15	28.9	242	13.7		34.4	322	23.7		42.3
8	30	31.4	257	13.2		33.5	337	24.4		42.7
9	45	33.8	272	12.7		32.7	352	25.0		43.2
10	60	36.3	287	12.3		31.9	7	25.6		43.6
11	75	38.8	302	11.8	+19	31.1	22	26.2	+18	44.1
12	90	41.2	317	11.4	+19	30.2	37	26.9	+18	44.6
13	105	43.7	332	10.9		29.4	52	27.5		45.0
14	120	46.1	347	10.4		28.6	67	28.1		45.5
15	135	48.6	2	10.0		27.8	82	28.7		45.9
16	150	51.1	17	09.5		26.9	97	29.4		46.4
17	165	53.5	32	09.1	+19	26.1	112	30.0	+18	46.8
18	180	56.0	47	08.6	+19	25.3	127	30.6	+18	47.3
19	195	58.5	62	08.2		24.5	142	31.2		47.7
20	211	00.9	77	07.7		23.6	157	31.9		48.2
21	226	03.4	92	07.3		22.8	172	32.5		48.6
22	241	05.9	107	06.8		22.0	187	33.1		49.1
23	256	08.3	122	06.4		21.1	202	33.7		49.5
24	271	10.8	137	05.9	+19	20.3	217	34.4	+18	50.0
Dif	—		-5		-8		+6		+5	
							+19		-1	
									+23	
									0	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15'7 PMG:12 ^h 02.3 ^m				Edad: 7.9 ^d SD: 15'2 PMG: 19 ^h 16 ^m		PHE { 4 ^h : 55'5 12 ^h : 55'3 20 ^h : 55'1 Rº: 45 ^m														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico			Hora	Rº	Hora	Rº					
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	179	27.8	+23	25.7	79	24.6	-8	46.8	60 N	21 28	23 14	**	**	14 36	90	23 40	2				
1	194	27.7		25.7	93	58.9 ¹⁵³	-9	00.7 ¹³⁹	58	21 08	22 23	**	**		28 86		48	7			
2	209	27.6		25.7	108	33.1 ¹⁵²		14.7 ¹⁴⁰	56	20 51	21 53	**	**		22 82		23 55	11			
3	224	27.4		25.6	123	07.4 ¹⁵³		28.6 ¹³⁹	54		36 31	23 18	16 79		**	**	**	**			
4	239	27.3		25.6	137	41.7 ¹⁵³		42.4 ¹³⁸	52	24	21 13	22 31	11 76		**	**	**	**			
5	254	27.2	+23	25.6	152	15.9 ¹⁵²	-9	56.2 ¹³⁸	50	20 13	20 58	22 04	14 06	74		**	**	**	**		
6	269	27.0	+23	25.5	166	50.2 ¹⁵³	-10	09.9 ¹³⁷	45	19 51	20 28	21 18	13 56	68		0 06	21				
7	284	26.9		25.5	181	24.4 ¹⁵²		23.6 ¹³⁶	40		33 20	06 20	47 65		12 24						
8	299	26.8		25.5	195	58.6 ¹⁵²		37.2 ¹³⁶	35	18	19 47	24 40	61 17		28 24						
9	314	26.6		25.4	210	32.8 ¹⁵²	-10	50.8 ¹³⁶	30	19 05	32 20	05 34	58 22		30 35						
10	329	26.5		25.4	225	07.0 ¹⁵²	-11	04.3 ¹³⁵	20	18 43	19 07	19 36	23 53		30 35						
11	344	26.4	+23	25.4	239	41.2 ¹⁵²	-11	17.7 ¹³⁴	10 N	18 24	18 47	19 14	13 14	49	0 37	40					
12	359	26.2	+23	25.3	254	15.3 ¹⁵¹	-11	31.1 ¹³⁴	0	18 06	18 28	18 55	13 05	45	0 43	44					
13	14	26.1		25.3	268	49.4 ¹⁵¹		44.5 ¹³⁴	10 S	17 48	18 11	38 12	57 40		50 48						
14	29	26.0		25.2	283	23.5 ¹⁵¹	-11	57.8 ¹³³	20	30	17 54	21 48	36 0	57 53							
15	44	25.8		25.2	297	57.6 ¹⁵¹	-12	11.0 ¹³²	30	17 09	35 18	05 37	32 1	05 58							
16	59	25.7		25.2	312	31.6 ¹⁵⁰		24.2 ¹³²	35	16 56	24 17	56 31	29 09	61							
17	74	25.6	+23	25.1	327	05.7 ¹⁵¹	-12	37.3 ¹³¹	40	16 42	17 13	17 47	12 25	25	1 15	64					
18	89	25.4	+23	25.1	341	39.7 ¹⁵⁰	-12	50.3 ¹³⁰	45	16 25	16 59	17 36	12 17	21	1 21	68					
19	104	25.3		25.0	356	13.6 ¹⁴⁹	-13	03.3 ¹³⁰	50	16 05	43 25	08 16	28 74								
20	119	25.2		25.0	10	47.6 ¹⁵⁰		16.2 ¹²⁹	52	15 55	36 19	12 03	15 32	76							
21	134	25.0		25.0	25	21.5 ¹⁴⁹		29.1 ¹²⁹	54	44	27 14	11 59	11 36	78							
22	149	24.9		24.9	39	55.4 ¹⁴⁹		41.9 ¹²⁸	56	31	18 07	53 9	40 82								
23	164	24.7		24.9	54	29.3 ¹⁴⁹	-13	54.6 ¹²⁷	58	15 16	16 08	17 01	48 5	44 86							
24	179	24.6	+23	24.8	69	03.1 ¹⁴⁸	-14	07.3 ¹²⁷	60 S	14 59	15 56	16 53	11 41	2	1 50	89					

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 54.3 ^m		Mag: -4.0 PMG: 14 ^h 52 ^m				Mag: +1.3 PMG: 9 ^h 29 ^m				Mag: -1.8 PMG: 13 ^h 56 ^m				Mag: +0.8 PMG: 6 ^h 49 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	271	10.8	137	05.9	+19	20.3	217	34.4	+18	50.0	150	30.3	+20	53.3	257	34.4	+3	16.7
1	286	13.3	152	05.5		19.5	232	35.0		50.5	165	32.2		53.2	272	36.8		16.7
2	301	15.7	167	05.0		18.6	247	35.6		50.9	180	34.1		53.1	287	39.1		16.7
3	316	18.2	182	04.6		17.8	262	36.2		51.4	195	36.0		53.0	302	41.4		16.8
4	331	20.6	197	04.1		17.0	277	36.9		51.8	210	38.0		52.9	317	43.8		16.8
5	346	23.1	212	03.7	+19	16.1	292	37.5	+18	52.3	225	39.9	+20	52.8	332	46.1	+3	16.9
6	1	25.6	227	03.2	+19	15.3	307	38.1	+18	52.7	240	41.8	+20	52.7	347	48.4	+3	16.9
7	16	28.0	242	02.8		14.4	322	38.7		53.2	255	43.7		52.6	2	50.8		17.0
8	31	30.5	257	02.3		13.6	337	39.4		53.6	270	45.6		52.5	17	53.1		17.0
9	46	33.0	272	01.9		12.8	352	40.0		54.1	285	47.5		52.4	32	55.4		17.0
10	61	35.4	287	01.5		11.9	7	40.6		54.5	300	49.4		52.3	47	57.8		17.1
11	76	37.9	302	01.0	+19	11.1	22	41.2	+18	55.0	315	51.4	+20	52.2	63	00.1	+3	17.1
12	91	40.4	317	00.6	+19	10.2	37	41.8	+18	55.4	330	53.3	+20	52.1	78	02.4	+3	17.2
13	106	42.8	332	00.1		09.4	52	42.5		55.8	345	55.2		52.0	93	04.8		17.2
14	121	45.3	346	59.7		08.6	67	43.1		56.3	0	57.1		51.9	108	07.1		17.3
15	136	47.7	1	59.3		07.7	82	43.7		56.7	15	59.0		51.8	123	09.4		17.3
16	151	50.2	16	58.8		06.9	97	44.3		57.2	31	00.9		51.7	138	11.8		17.3
17	166	52.7	31	58.4	+19	06.0	112	45.0	+18	57.6	46	02.8	+20	51.6	153	14.1	+3	17.4
18	181	55.1	46	57.9	+19	05.2	127	45.6	+18	58.1	61	04.8	+20	51.5	168	16.4	+3	17.4
19	196	57.6	61	57.5		04.3	142	46.2		58.5	76	06.7		51.4	183	18.8		17.5
20	212	00.1	76	57.1		03.5	157	46.8		59.0	91	08.6		51.2	198	21.1		17.5
21	227	02.5	91	56.6		02.6	172	47.5		59.4	106	10.5		51.1	213	23.4		17.6
22	242	05.0	106	56.2		01.8	187	48.1	+18	59.9	121	12.4		51.0	228	25.8		17.6
23	257	07.5	121	55.8		00.9	202	48.7	+19	00.3	136	14.3		50.9	243	28.1		17.6
24	272	09.9	136	55.3	+19	00.1	217	49.3	+19	00.8	151	16.2	+20	50.8	258	30.4	+3	17.7
Dif	—		-4		-8		+6		+4		+19		-1		+23			

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/7 PMG:12 ^h 02.5 ^m			Edad: 8.9 ^d PHE { 4 ^h : 55/0 12 ^h : 54/8 20 ^h : 54/6 R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif		Dec		Dif		Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	179	24.6	+23	24.8	69	03.1	-14	07.3	126	60 N	** **	0 51	2 37	16 04	91	23 41	3	
1	194	24.5		24.8	83	36.9	148	19.9	125	58	** **	1 42	2 57	15 52	86	23 53	8	
2	209	24.3		24.7	98	10.7	148	32.4	125	56	** **	2 11	3 14	42 81		** **	**	
3	224	24.2		24.7	112	44.4	147	44.9	124	54	0 47	34	28	33 78	0 02	11		
4	239	24.1		24.6	127	18.1	147	-14	57.3	124	1 33	2 52	41	25 75	08 14			
5	254	23.9	+23	24.6	141	51.8	147	-15	09.6	123	2 01	3 07	3 51	15 18	72	0 13	17	
6	269	23.8	+23	24.5	156	25.4	146	-15	21.9	123	2 47	3 37	4 14	15 03	67	0 25	22	
7	284	23.7		24.5	170	59.0	146	34.1	122	40	3 17	3 59	32	14 50	63	35 25		
8	299	23.5		24.4	185	32.5	145	46.2	121	35	41	4 17	4 47	40 60	43 29			
9	314	23.4		24.4	200	06.0	145	-15	58.2	120	3 59	33	5 00	31 57	0 51	31		
10	329	23.3		24.3	214	39.5	145	-16	10.2	120	4 28	4 58	22	15 52	1 04	36		
11	344	23.1	+23	24.3	229	12.9	144	-16	22.1	119	10 N	4 51	5 18	5 41	14 01	49	1 15	40
12	359	23.0	+23	24.2	243	46.3	144	-16	33.9	118	0	5 10	5 36	5 59	13 49	45	1 26	44
13	14	22.9		24.2	258	19.7	144	45.7	117	10 S	27	5 53	6 16	36 41	37 48			
14	29	22.7		24.1	272	53.0	143	-16	57.4	117	20	5 43	6 11	35 22	38 1 48	52		
15	44	22.6		24.1	287	26.3	143	-17	09.0	116	30	6 00	30 6 56	13 07 33	2 01 57			
16	59	22.5		24.0	301	59.5	142	20.5	115	35	09	40 7 08	12 58 31	09 60				
17	74	22.3	+23	23.9	316	32.7	142	-17	31.9	114	40	6 18	6 52	7 23 12 48	28 2 18	63		
18	89	22.2	+23	23.9	331	05.8	141	-17	43.3	114	45	6 28	7 06	7 39 12 37	23 2 28	67		
19	104	22.1		23.8	345	38.9	141	-17	54.6	113	50	40	22 8 00	23 18 41	72			
20	119	21.9		23.8	0	12.0	141	-18	05.8	112	52	45	29 10 16	17 46 75				
21	134	21.8		23.7	14	45.0	140	16.9	111	54	51	37 21 09	14 2 53	77				
22	149	21.7		23.6	29	17.9	139	27.9	110	56	6 57	46 34 12	01 10 3 00	81				
23	164	21.5		23.6	43	50.8	139	38.9	110	58	7 04	7 57 8 49	11 52 7 08	85				
24	179	21.4	+23	23.5	58	23.7	139	-18	49.8	109	60 S	7 11	8 08 9 06	11 42 2 3 18	89			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 50.4 ^m		Mag: -4.0 PMG: 14 ^h 53 ^m		Mag: +1.3 PMG: 9 ^h 28 ^m		Mag: -1.8 PMG: 13 ^h 53 ^m		Mag: +0.8 PMG: 6 ^h 45 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	272	09.9	136	55.3	+19	00.1	217	49.3	+20	00.8
1	287	12.4	151	54.9	+18	59.2	232	50.0		01.2
2	302	14.9	166	54.5		58.4	247	50.6		01.6
3	317	17.3	181	54.0		57.5	262	51.2		02.1
4	332	19.8	196	53.6		56.7	277	51.8		02.5
5	347	22.2	211	53.2	+18	55.8	292	52.4	+19	03.0
6	2	24.7	226	52.8	+18	54.9	307	53.1	+19	03.4
7	17	27.2	241	52.3		54.1	322	53.7		03.9
8	32	29.6	256	51.9		53.2	337	54.3		04.3
9	47	32.1	271	51.5		52.4	352	54.9		04.7
10	62	34.6	286	51.0		51.5	7	55.6		05.2
11	77	37.0	301	50.6	+18	50.6	22	56.2	+19	05.6
12	92	39.5	316	50.2	+18	49.8	37	56.8	+19	06.1
13	107	42.0	331	49.8		48.9	52	57.4		06.5
14	122	44.4	346	49.4		48.1	67	58.0		06.9
15	137	46.9	1	48.9		47.2	82	58.7		07.4
16	152	49.4	16	48.5		46.3	97	59.3		07.8
17	167	51.8	31	48.1	+18	45.5	112	59.9	+19	08.3
18	182	54.3	46	47.7	+18	44.6	128	00.5	+19	08.7
19	197	56.7	61	47.3		43.7	143	01.2		09.1
20	212	59.2	76	46.8		42.9	158	01.8		09.6
21	228	01.7	91	46.4		42.0	173	02.4		10.0
22	243	04.1	106	46.0		41.1	188	03.0		10.4
23	258	06.6	121	45.6		40.3	203	03.6		10.9
24	273	09.1	136	45.2	+18	39.4	218	04.3	+19	11.3
Dif	—		-4		-9		+6		+4	
							+19		-1	
									+23	
									0	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'7 PMG:12 ^h 02.7 ^m				Edad: 9.9 ^d SD: 14'9 PMG: 20 ^h 45 ^m PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3 R°: 49 ^m																
	hG ☉	Dec			hG ☾	Dif			Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	179	21.4	+23	23.5	58	23.7	-18	49.8	108	60 N	21 28	23 12	** **	** **	17 35	93	23 44	8			
1	194	21.3		23.5	72	56.5	-19	00.6	107	58	21 07	22 23	** **	** **	18 86		** **	** **			
2	209	21.1		23.4	87	29.3		11.3	106	56	20 51	21 53	** **	** **	17 03	81	0 04	14			
3	224	21.0		23.3	102	02.0		21.9	105	54	37	31	23 17		16 51	77	14	17			
4	239	20.9		23.3	116	34.6		32.4	105	52	24	21 13	22 31		40 74		22	20			
5	254	20.7	+23	23.2	131	07.3	-19	42.9	105	50	20 13	20 58	22 03		16 30	72	0 30	23			
6	269	20.6	+23	23.1	145	39.8	-19	53.3	104	45	19 51	20 28	21 18		16 10	67	0 47	27			
7	284	20.5		23.1	160	12.3	-20	03.5	102	40	33	20 06	20 47		15 53	64	1 00	31			
8	299	20.3		23.0	174	44.8		13.7	102	35	18	19 48	24		40 61		12	34			
9	314	20.2		22.9	189	17.2		23.8	101	30	19 05	32	20 06		28 58		22	37			
10	329	20.1		22.9	203	49.6		33.8	100	20	18 43	19 07	19 37		15 07	55	40	41			
11	344	19.9	+23	22.8	218	21.9	-20	43.7	99	10 N	18 24	18 47	19 14		14 50	51	1 55	45			
12	359	19.8	+23	22.7	232	54.1	-20	53.6	99	0	18 06	18 29	18 55		14 34	48	2 10	47			
13	14	19.7		22.6	247	26.3	-21	03.3	97	10 S	17 49	18 12	38		17 46		25	50			
14	29	19.6		22.6	261	58.4		12.9	96	20	30	17 54	22		14 00	42	40	55			
15	44	19.4		22.5	276	30.5		22.5	96	30	17 09	36	18 05		13 40	39	2 58	59			
16	59	19.3		22.4	291	02.6		31.9	94	35	16 57	25	17 57		29 36		3 09	61			
17	74	19.2	+23	22.3	305	34.6	-21	41.3	94	40	16 43	17 13	17 47		13 16	33	3 21	64			
18	89	19.0	+23	22.3	320	06.5	-21	50.5	92	45	16 26	17 00	17 37		13 00	30	3 35	68			
19	104	18.9		22.2	334	38.4	-21	59.7	92	50	16 05	16 44	25		12 41	26	3 53	73			
20	119	18.8		22.1	349	10.2	-22	08.7	90	52	15 55	36	20		33 23		4 01	76			
21	134	18.6		22.0	3	41.9		17.7	90	54	44	28	14		23 20		10	79			
22	149	18.5		22.0	18	13.6		26.5	88	56	32	19	08		12 11	17	21	82			
23	164	18.4		21.9	32	45.3		35.3	88	58	15 17	16 09	17 01		11 59	12	33	87			
24	179	18.2	+23	21.8	47	16.9	-22	44.0	87	60 S	14 59	15 57	16 54		11 44	6	4 47	93			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO									
	PMG 5 ^h 46.4 ^m		Mag: -4.0 PMG: 14 ^h 53 ^m			Mag: +1.3 PMG: 9 ^h 27 ^m			Mag: -1.8 PMG: 13 ^h 50 ^m			Mag: +0.8 PMG: 6 ^h 41 ^m									
	hG ♈	hG ♀			hG ♂			hG ♃			hG ♄										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'							
0	273	09.1	136	45.2	+18	39.4	218	04.3	+19	11.3	152	02.2	+20	48.3							
1	288	11.5	151	44.8		38.5	233	04.9		11.8	167	04.1		48.2							
2	303	14.0	166	44.3		37.6	248	05.5		12.2	182	06.0		48.1							
3	318	16.5	181	43.9		36.8	263	06.1		12.6	197	07.9		48.0							
4	333	18.9	196	43.5		35.9	278	06.8		13.1	212	09.8		47.9							
5	348	21.4	211	43.1	+18	35.0	293	07.4	+19	13.5	227	11.7	+20	47.8							
6	3	23.9	226	42.7	+18	34.1	308	08.0	+19	13.9	242	13.6	+20	47.7							
7	18	26.3	241	42.3		33.3	323	08.6		14.4	257	15.5		47.6							
8	33	28.8	256	41.9		32.4	338	09.2		14.8	272	17.5		47.4							
9	48	31.2	271	41.5		31.5	353	09.9		15.2	287	19.4		47.3							
10	63	33.7	286	41.1		30.6	8	10.5		15.7	302	21.3		47.2							
11	78	36.2	301	40.6	+18	29.7	23	11.1	+19	16.1	317	23.2	+20	47.1							
12	93	38.6	316	40.2	+18	28.9	38	11.7	+19	16.5	332	25.1	+20	47.0							
13	108	41.1	331	39.8		28.0	53	12.3		17.0	347	27.0		46.9							
14	123	43.6	346	39.4		27.1	68	13.0		17.4	2	28.9		46.8							
15	138	46.0	1	39.0		26.2	83	13.6		17.8	17	30.8		46.7							
16	153	48.5	16	38.6		25.3	98	14.2		18.3	32	32.7		46.6							
17	168	51.0	31	38.2	+18	24.5	113	14.8	+19	18.7	47	34.7	+20	46.5							
18	183	53.4	46	37.8	+18	23.6	128	15.5	+19	19.1	62	36.6	+20	46.4							
19	198	55.9	61	37.4		22.7	143	16.1		19.5	77	38.5		46.3							
20	213	58.3	76	37.0		21.8	158	16.7		20.0	92	40.4		46.2							
21	229	00.8	91	36.6		20.9	173	17.3		20.4	107	42.3		46.1							
22	244	03.3	106	36.2		20.0	188	17.9		20.8	122	44.2		46.0							
23	259	05.7	121	35.8		19.1	203	18.6		21.3	137	46.1		45.9							
24	274	08.2	136	35.4	+18	18.2	218	19.2	+19	21.7	152	48.0	+20	45.7							
Dif	—		-4		-9		+6		+4		+19		-1		+23						

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15/7 PMG:12 ^h 02.9 ^m			Edad: 10.9 ^d PHE { 4 ^h : 54/2 12 ^h : 54/1 20 ^h : 54/1 R°: 49 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°		Hora	R°		
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m
0	179	18.2	+23	21.8	47	16.9	125	-22	44.0	85	60 N	0 53	2 38	19 07	86	23 51	17
1	194	18.1		21.7	61	48.4	125	-22	52.5	85	58	1 43	2 58	18 42	79	0 01	14
2	209	18.0		21.6	76	19.9	125	-23	01.0	83	56	2 13	3 15	23 74		17 18	
3	224	17.8		21.6	90	51.4	125		09.3	83	54	0 49	35	29 18	07 70	30 22	
4	239	17.7		21.5	105	22.7	123		17.6	81	52	1 35	2 53	41 17	53 68	41 25	
5	254	17.6	+23	21.4	119	54.0	123	-23	25.7	83	50	2 02	3 08	3 52	17 41	66	0 51
6	269	17.4	+23	21.3	134	25.3	123	-23	33.7	80	45	2 48	3 37	4 15	17 16	62	1 13
7	284	17.3		21.2	148	56.5	122		41.7	80	40	3 18	4 00	33 16	56 60	30 35	
8	299	17.2		21.1	163	27.7	122		49.5	78	35	3 41	18	4 48	39 58	45 37	
9	314	17.1		21.1	177	58.8	121	-23	57.2	77	30	4 00	33	5 01	25 56	1 57	40
10	329	16.9		21.0	192	29.8	120	-24	04.8	76	20	29	4 58	23	16 01	54	2 19
11	344	16.8	+23	20.9	207	00.8	120	-24	12.3	75	10 N	4 52	5 19	5 42	15 40	52	2 38
12	359	16.7	+23	20.8	221	31.8	120	-24	19.7	74	0	5 10	5 37	5 59	15 21	49	2 56
13	14	16.5		20.7	236	02.6	118		27.0	73	10 S	27	5 54	6 17	15 02	47	3 14
14	29	16.4		20.6	250	33.5	118		34.1	71	20	5 44	6 11	35	14 41	45	33 54
15	44	16.3		20.5	265	04.3	118		41.2	71	30	6 00	30	6 56	17 43	3 55	57
16	59	16.1		20.4	279	35.0	117		48.1	69	35	09	40	7 09	14 04	40	4 08
17	74	16.0	+23	20.3	294	05.7	117	-24	54.9	68	40	6 18	6 52	7 23	13 48	38	4 24
18	89	15.9	+23	20.3	308	36.3	116	-25	01.7	68	45	6 28	7 06	7 40	13 29	36	4 42
19	104	15.7		20.2	323	06.8	115		08.3	66	50	40	22	8 00	13 05	32	5 04
20	119	15.6		20.1	337	37.4	116		14.7	64	52	45	29	10	12 54	30	15 71
21	134	15.5		20.0	352	07.8	114		21.1	64	54	51	37	21	41 28	27 74	
22	149	15.4		19.9	6	38.2	114		27.4	63	56	6 57	46	34	27 24	42 77	
23	164	15.2		19.8	21	08.6	114		33.5	61	58	7 04	7 57	8 48	12 10	19	5 58
24	179	15.1	+23	19.7	35	38.9	113	-25	39.5	60	60 S	7 11	8 08	9 06	11 49	12	6 18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 42.5 ^m		Mag: -4.0 PMG: 14 ^h 54 ^m		Mag: +1.3 PMG: 9 ^h 26 ^m		Mag: -1.8 PMG: 13 ^h 47 ^m		Mag: +0.8 PMG: 6 ^h 37 ^m	
	hG ♊	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	274	08.2	136	35.4	+18	18.2	218	19.2	+19	21.7
1	289	10.7	151	35.0		17.4	233	19.8		22.1
2	304	13.1	166	34.6		16.5	248	20.4		22.6
3	319	15.6	181	34.2		15.6	263	21.0		23.0
4	334	18.1	196	33.8		14.7	278	21.7		23.4
5	349	20.5	211	33.4	+18	13.8	293	22.3	+19	23.8
6	4	23.0	226	33.0	+18	12.9	308	22.9	+19	24.3
7	19	25.5	241	32.6		12.0	323	23.5		24.7
8	34	27.9	256	32.3		11.1	338	24.1		25.1
9	49	30.4	271	31.9		10.2	353	24.8		25.5
10	64	32.8	286	31.5		09.3	8	25.4		26.0
11	79	35.3	301	31.1	+18	08.4	23	26.0	+19	26.4
12	94	37.8	316	30.7	+18	07.5	38	26.6	+19	26.8
13	109	40.2	331	30.3		06.6	53	27.2		27.2
14	124	42.7	346	29.9		05.7	68	27.9		27.7
15	139	45.2	1	29.5		04.8	83	28.5		28.1
16	154	47.6	16	29.1		03.9	98	29.1		28.5
17	169	50.1	31	28.8	+18	03.0	113	29.7	+19	28.9
18	184	52.6	46	28.4	+18	02.1	128	30.3	+19	29.3
19	199	55.0	61	28.0		01.2	143	31.0		29.8
20	214	57.5	76	27.6	+18	00.3	158	31.6		30.2
21	230	00.0	91	27.2	+17	59.4	173	32.2		30.6
22	245	02.4	106	26.8		58.5	188	32.8		31.0
23	260	04.9	121	26.5		57.6	203	33.4		31.5
24	275	07.3	136	26.1	+17	56.7	218	34.1	+19	31.9
Dif	—		-4		-9		+6		+4	
									+19	
									-1	
									+23	

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna						
	SD: 15'7 PMG: 12 ^h 03.1 ^m			Edad: 11.9 ^d PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 Rº: 53 ^m																				
	hG ☉	Dec		hG ☾	Dif		Dec		Dif			Civil	Náutico	Hora	Rº	Hora	Rº							
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m			
0	179	15.1	+23	19.7	35	38.9	-25	39.5	59	58	60 N	21	27	23	10	**	**	20	33	69	**	**	**	
1	194	15.0		19.6	50	09.2		45.4	58	58		21	07	22	22	**	**	20	01	64	0	15	27	
2	209	14.8		19.5	64	39.4		51.2	56	56		20	50	21	52	**	**	19	37	62	5	35	31	
3	224	14.7		19.4	79	09.6		56.8	56	54			36		30	23	14		17	61	0	52	34	
4	239	14.6		19.3	93	39.7		02.4	56	52			24	21	13	22	30		19	01	60	1	06	36
5	254	14.5	+23	19.2	108	09.8		07.8	54	50		20	13	20	58	22	03		18	47	59	1	19	38
6	269	14.3	+23	19.1	122	39.8		13.1	53	45		19	51	20	28	21	18		18	18	58	1	44	42
7	284	14.2		19.0	137	09.8		18.2	51	40			33	20	06	20	47		17	56	57	2	05	43
8	299	14.1		18.9	151	39.7		23.3	51	35			18	19	48		24		37	56		22	45	
9	314	13.9		18.8	166	09.6		28.2	49	30		19	05		32	20	06		17	21	56	2	37	46
10	329	13.8		18.7	180	39.4		33.0	48	20		18	43	19	08	19	37		16	55	54	3	02	49
11	344	13.7	+23	18.6	195	09.2		37.7	47	10 N		18	24	18	47	19	14		16	32	53	3	24	50
12	359	13.5	+23	18.5	209	39.0		42.2	45	0		18	07	18	29	18	55		16	10	53	3	44	52
13	14	13.4		18.4	224	08.7		46.7	43	10 S		17	49	18	12		39		15	49	51	4	05	53
14	29	13.3		18.3	238	38.4		51.0	41	20			31	17	55		22		26	51		27	55	
15	44	13.2		18.1	253	08.1		55.1	41	30		17	10		36	18	06		15	00	49	4	52	57
16	59	13.0		18.0	267	37.7		59.2	41	35		16	58		26	17	57		14	44	48	5	07	58
17	74	12.9	+23	17.9	282	07.2		03.1	39	40		16	43	17	14	17	48		14	26	47	5	25	59
18	89	12.8	+23	17.8	296	36.8		06.9	38	45		16	27	17	01	17	38		14	05	45	5	46	61
19	104	12.6		17.7	311	06.3		10.5	36	50		16	06	16	45	26			13	37	44	6	13	64
20	119	12.5		17.6	325	35.7		14.1	36	52		15	56		37	21			24	42		26	65	
21	134	12.4		17.5	340	05.1		17.5	34	54			45		29	15			13	09	40	41	67	
22	149	12.3		17.4	354	34.5		20.8	33	56			33		20	09			12	51	38	6	59	69
23	164	12.1		17.3	9	03.9		23.9	31	58		18		16	10	17	02		29	35		7	20	73
24	179	12.0	+23	17.1	23	33.2		26.9	30	60 S		15	01	15	58	16	55		12	01	28	7	48	80

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 5 ^h 38.6 ^m			Mag: -4.1 PMG: 14 ^h 55 ^m			Mag: +1.3 PMG: 9 ^h 25 ^m			Mag: -1.8 PMG: 13 ^h 44 ^m			Mag: +0.8 PMG: 6 ^h 34 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec		hG ♏	Dec		hG ♏	Dec		hG ♏	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	275	07.3	136	26.1	+17	56.7	218	34.1	+19	31.9	153	33.9	+20	43.2	261	19.0	+3	20.5
1	290	09.8	151	25.7		55.8	233	34.7		32.3	168	35.8		43.1	276	21.4		20.6
2	305	12.3	166	25.3		54.9	248	35.3		32.7	183	37.7		43.0	291	23.7		20.6
3	320	14.7	181	24.9		54.0	263	35.9		33.1	198	39.6		42.8	306	26.1		20.7
4	335	17.2	196	24.6		53.0	278	36.5		33.6	213	41.5		42.7	321	28.4		20.7
5	350	19.7	211	24.2	+17	52.1	293	37.2	+19	34.0	228	43.4	+20	42.6	336	30.8	+3	20.7
6	5	22.1	226	23.8	+17	51.2	308	37.8	+19	34.4	243	45.3	+20	42.5	351	33.1	+3	20.8
7	20	24.6	241	23.4		50.3	323	38.4		34.8	258	47.2		42.4	6	35.4		20.8
8	35	27.1	256	23.1		49.4	338	39.0		35.2	273	49.2		42.3	21	37.8		20.8
9	50	29.5	271	22.7		48.5	353	39.6		35.6	288	51.1		42.2	36	40.1		20.9
10	65	32.0	286	22.3		47.6	8	40.3		36.1	303	53.0		42.1	51	42.5		20.9
11	80	34.5	301	21.9	+17	46.7	23	40.9	+19	36.5	318	54.9	+20	42.0	66	44.8	+3	20.9
12	95	36.9	316	21.6	+17	45.7	38	41.5	+19	36.9	333	56.8	+20	41.9	81	47.2	+3	21.0
13	110	39.4	331	21.2		44.8	53	42.1		37.3	348	58.7		41.8	96	49.5		21.0
14	125	41.8	346	20.8		43.9	68	42.7		37.7	4	00.6		41.7	111	51.9		21.1
15	140	44.3	1	20.5		43.0	83	43.3		38.1	19	02.5		41.5	126	54.2		21.1
16	155	46.8	16	20.1		42.1	98	44.0		38.6	34	04.4		41.4	141	56.6		21.1
17	170	49.2	31	19.7	+17	41.2	113	44.6	+19	39.0	49	06.3	+20	41.3	156	58.9	+3	21.2
18	185	51.7	46	19.3	+17	40.2	128	45.2	+19	39.4	64	08.2	+20	41.2	172	01.3	+3	21.2
19	200	54.2	61	19.0		39.3	143	45.8		39.8	79	10.2		41.1	187	03.6		21.2
20	215	56.6	76	18.6		38.4	158	46.4		40.2	94	12.1		41.0	202	06.0		21.3
21	230	59.1	91	18.2		37.5	173	47.1		40.6	109	14.0		40.9	217	08.3		21.3
22	246	01.6	106	17.9		36.5	188	47.7		41.0	124	15.9		40.8	232	10.7		21.3
23	261	04.0	121	17.5		35.6	203	48.3		41.5	139	17.8		40.7	247	13.0		21.4
24	276	06.5	136	17.2	+17	34.7	218	48.9	+19	41.9	154	19.7	+20	40.6	262	15.4	+3	21.4
Dif	—		-4		-9		+6		+4		+19		-1		+23			0

UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG:12 ^h 03.3 ^m			Edad: 12.9 ^d PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 PMG: 23 ^h 14 ^m R°: 51 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	m
0	179	12.0	+23	17.1	23	33.2	103	-27	26.9	29	60 N	***	0 57	2 39	21 41	36	0 08 39
1	194	11.9		17.0	38	02.5	103		29.8	29	58	***	1 45	3 00	21 04	41	0 40 44
2	209	11.8		16.9	52	31.8	103		32.5	27	56	***	2 14	16	20 37	44	1 05 45
3	224	11.6		16.8	67	01.0	102		35.2	27	54	0 52	36	30	20 17	45	24 47
4	239	11.5		16.7	81	30.3	103		37.6	24	52	1 36	2 54	42	19 59	46	41 47
5	254	11.4	+23	16.6	95	59.5	102	-27	40.0	24	50	2 04	3 09	3 53	19 44	47	1 55 48
6	269	11.2	+23	16.5	110	28.6	101	-27	42.2	22	45	2 49	3 38	4 16	19 14	49	2 24 49
7	284	11.1		16.3	124	57.8	102		44.3	21	40	3 19	4 01	33	18 51	49	2 47 49
8	299	11.0		16.2	139	26.9	101		46.2	19	35	3 42	19	4 48	32 49		3 06 50
9	314	10.9		16.1	153	56.0	101		48.1	19	30	4 01	34	5 01	18 15	50	22 50
10	329	10.7		16.0	168	25.1	101		49.8	17	20	30	4 59	23	17 47	51	3 49 51
11	344	10.6	+23	15.9	182	54.1	100	-27	51.3	15	10 N	4 52	5 19	5 42	17 23	52	4 13 51
12	359	10.5	+23	15.7	197	23.2	101	-27	52.7	14	0	5 11	5 37	6 00	17 01	52	4 35 51
13	14	10.4		15.6	211	52.2	100		54.0	13	10 S	28	5 54	17	16 39	52	4 57 51
14	29	10.2		15.5	226	21.2	100		55.2	12	20	5 44	6 11	35	16 15	52	5 20 52
15	44	10.1		15.4	240	50.2	100		56.2	10	30	6 00	30	6 56	15 47	53	5 48 52
16	59	10.0		15.2	255	19.2	100		57.0	8	35	09	41	7 09	31 53		6 04 52
17	74	09.8	+23	15.1	269	48.2	100	-27	57.8	8	40	6 18	6 52	7 23	15 12	53	6 23 52
18	89	09.7	+23	15.0	284	17.1	99	-27	58.4	6	45	6 29	7 06	7 40	14 49	53	6 46 52
19	104	09.6		14.9	298	46.1	100		58.9	5	50	40	22	8 00	19 54		7 15 53
20	119	09.5		14.7	313	15.0	99		59.2	3	52	45	29	10	14 05	54	30 52
21	134	09.3		14.6	327	44.0	100		59.4	2	54	51	37	21	13 48	54	7 46 53
22	149	09.2		14.5	342	12.9	99		59.5	1	56	6 57	46	33	28 54		8 07 52
23	164	09.1		14.3	356	41.8	99		59.4	1	58	7 04	7 56	8 48	13 02	55	8 32 52
24	179	09.0	+23	14.2	11	10.7	99	-27	59.2	2	60 S	7 11	8 08	9 05	12 28	55	9 06 52

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 34.7 ^m		Mag: -4.1 PMG: 14 ^h 55 ^m		Mag: +1.4 PMG: 9 ^h 24 ^m		Mag: -1.8 PMG: 13 ^h 41 ^m		Mag: +0.8 PMG: 6 ^h 30 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	276	06.5	136	17.2	+17	34.7	218	48.9	+19	41.9	154	19.7	+20	40.6	262	15.4	+3	21.4
1	291	08.9	151	16.8		33.8	233	49.5		42.3	169	21.6		40.5	277	17.7		21.5
2	306	11.4	166	16.4		32.8	248	50.2		42.7	184	23.5		40.3	292	20.1		21.5
3	321	13.9	181	16.1		31.9	263	50.8		43.1	199	25.4		40.2	307	22.4		21.5
4	336	16.3	196	15.7		31.0	278	51.4		43.5	214	27.3		40.1	322	24.8		21.6
5	351	18.8	211	15.3	+17	30.1	293	52.0	+19	43.9	229	29.2	+20	40.0	337	27.1	+3	21.6
6	6	21.3	226	15.0	+17	29.1	308	52.6	+19	44.3	244	31.1	+20	39.9	352	29.5	+3	21.6
7	21	23.7	241	14.6		28.2	323	53.2		44.7	259	33.1		39.8	7	31.8		21.7
8	36	26.2	256	14.3		27.3	338	53.9		45.2	274	35.0		39.7	22	34.2		21.7
9	51	28.7	271	13.9		26.3	353	54.5		45.6	289	36.9		39.6	37	36.5		21.7
10	66	31.1	286	13.6		25.4	8	55.1		46.0	304	38.8		39.5	52	38.9		21.8
11	81	33.6	301	13.2	+17	24.5	23	55.7	+19	46.4	319	40.7	+20	39.4	67	41.2	+3	21.8
12	96	36.1	316	12.9	+17	23.6	38	56.3	+19	46.8	334	42.6	+20	39.3	82	43.6	+3	21.8
13	111	38.5	331	12.5		22.6	53	57.0		47.2	349	44.5		39.1	97	45.9		21.9
14	126	41.0	346	12.1		21.7	68	57.6		47.6	4	46.4		39.0	112	48.3		21.9
15	141	43.4	1	11.8		20.7	83	58.2		48.0	19	48.3		38.9	127	50.6		21.9
16	156	45.9	16	11.4		19.8	98	58.8		48.4	34	50.2		38.8	142	53.0		22.0
17	171	48.4	31	11.1	+17	18.9	113	59.4	+19	48.8	49	52.1	+20	38.7	157	55.3	+3	22.0
18	186	50.8	46	10.7	+17	17.9	129	00.0	+19	49.2	64	54.0	+20	38.6	172	57.7	+3	22.1
19	201	53.3	61	10.4		17.0	144	00.7		49.6	79	55.9		38.5	188	00.1		22.1
20	216	55.8	76	10.0		16.1	159	01.3		50.0	94	57.9		38.4	203	02.4		22.1
21	231	58.2	91	09.7		15.1	174	01.9		50.5	109	59.8		38.3	218	04.8		22.2
22	247	00.7	106	09.3		14.2	189	02.5		50.9	125	01.7		38.2	233	07.1		22.2
23	262	03.2	121	09.0		13.2	204	03.1		51.3	140	03.6		38.1	248	09.5		22.2
24	277	05.6	136	08.6	+17	12.3	219	03.7	+19	51.7	155	05.5	+20	37.9	263	11.8	+3	22.3
Dif	—		-4		-9		+6		+4		+19		-1		+24		0	

UT	SOL				LUNA							Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna				
	SD: 15'7 PMG:12 ^h 03.5 ^m				Edad: 13.9 ^d PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'1 R°: **m																			
	hG ☉		Dec		hG ☾		Dif		Dec					Dif		Civil		Náutico	Hora		R°	Hora		R°
h	°	'	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	179	09.0	+23	14.2	11	10.7			-27	59.2	4	60 N	21	26	23	07	**	**	22	17	17	0	47	72
1	194	08.8		14.1	25	39.7	100			58.8	4	58	21	06	22	20	**	**	21	45	25	1	24	67
2	209	08.7		13.9	40	08.6	99			58.4	7	56	20	50	21	51	**	**		21	30	1	50	64
3	224	08.6		13.8	54	37.5	99			57.7	7	54		36		30	23	11	21	02	33	2	11	66
4	239	08.5		13.7	69	06.4	99			57.0	9	52		24	21	12	22	29	20	45	36		28	62
5	254	08.3	+23	13.5	83	35.4	100		-27	56.1	7	50	20	13	20	57	22	02	20	31	37	2	43	61
6	269	08.2	+23	13.4	98	04.3	99		-27	55.1	10	45	19	51	20	28	21	17	20	03	40	3	13	59
7	284	08.1		13.3	112	33.2	99			53.9	12	40		33	20	06	20	47	19	40	43		36	58
8	299	08.0		13.1	127	02.2	100			52.6	13	35		18	19	48		24		21	45	3	56	56
9	314	07.8		13.0	141	31.1	99			51.2	16	30	19	05		33	20	06	19	05	46	4	12	56
10	329	07.7		12.9	156	00.1	100			49.6	14	20	18	43	19	08	19	37	18	38	48	4	40	55
11	344	07.6	+23	12.7	170	29.1	100		-27	47.9	17	10 N	18	25	18	48	19	15	18	15	50	5	04	54
12	359	07.5	+23	12.6	184	58.1	100		-27	46.1	18	0	18	07	18	30	18	56	17	53	52	5	26	53
13	14	07.3		12.4	199	27.1	100			44.1	20	10 S	17	50	18	13		39		31	53	5	48	52
14	29	07.2		12.3	213	56.1	100			42.0	21	20		32	17	56		23	17	07	56	6	12	50
15	44	07.1		12.2	228	25.1	100			39.8	22	30	17	11		37	18	07	16	40	58		40	49
16	59	07.0		12.0	242	54.2	101			37.4	24	35	16	58		26	17	58		24	59	6	56	48
17	74	06.8	+23	11.9	257	23.2	100		-27	34.9	25	40	16	44	17	15	17	49	16	05	60	7	15	47
18	89	06.7	+23	11.7	271	52.3	101		-27	32.2	27	45	16	28	17	01	17	39	15	42	62	7	38	45
19	104	06.6		11.6	286	21.4	101			29.5	27	50	16	07	16	46	27		15	13	65	8	08	42
20	119	06.5		11.4	300	50.6	102			26.6	29	52	15	57		38	22		14	59	66	22	41	
21	134	06.3		11.3	315	19.7	101			23.5	31	54		46		30	16			42	68		39	39
22	149	06.2		11.2	329	48.9	102			20.3	32	56		34		21	10		14	22	71	8	59	37
23	164	06.1		11.0	344	18.1	102			17.0	33	58		20		11	17	04	13	57	75	9	24	33
24	179	06.0	+23	10.9	358	47.3	102		-27	13.6	34	60 S	15	02	16	00	16	56	13	23	82	9	58	27
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO									
	PMG 5 ^h 30.7 ^m		Mag: -4.1 PMG: 14 ^h 56 ^m				Mag: +1.4 PMG: 9 ^h 23 ^m				Mag: -1.8 PMG: 13 ^h 38 ^m				Mag: +0.8 PMG: 6 ^h 26 ^m									
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	277	05.6	136	08.6	+17	12.3	219	03.7	+19	51.7	155	05.5	+20	37.9	263	11.8	+3	22.3						
1	292	08.1	151	08.3		11.4	234	04.4		52.1	170	07.4		37.8	278	14.2		22.3						
2	307	10.6	166	08.0		10.4	249	05.0		52.5	185	09.3		37.7	293	16.5		22.3						
3	322	13.0	181	07.6		09.5	264	05.6		52.9	200	11.2		37.6	308	18.9		22.4						
4	337	15.5	196	07.3		08.5	279	06.2		53.3	215	13.1		37.5	323	21.2		22.4						
5	352	17.9	211	06.9	+17	07.6	294	06.8	+19	53.7	230	15.0	+20	37.4	338	23.6	+3	22.4						
6	7	20.4	226	06.6	+17	06.6	309	07.5	+19	54.1	245	16.9	+20	37.3	353	25.9	+3	22.5						
7	22	22.9	241	06.2		05.7	324	08.1		54.5	260	18.8		37.2	8	28.3		22.5						
8	37	25.3	256	05.9		04.8	339	08.7		54.9	275	20.7		37.1	23	30.6		22.5						
9	52	27.8	271	05.6		03.8	354	09.3		55.3	290	22.6		37.0	38	33.0		22.6						
10	67	30.3	286	05.2		02.9	9	09.9		55.7	305	24.5		36.8	53	35.4		22.6						
11	82	32.7	301	04.9	+17	01.9	24	10.5	+19	56.1	320	26.5	+20	36.7	68	37.7	+3	22.6						
12	97	35.2	316	04.6	+17	01.0	39	11.2	+19	56.5	335	28.4	+20	36.6	83	40.1	+3	22.7						
13	112	37.7	331	04.2	+17	00.0	54	11.8		56.9	350	30.3		36.5	98	42.4		22.7						
14	127	40.1	346	03.9	+16	59.1	69	12.4		57.3	5	32.2		36.4	113	44.8		22.7						
15	142	42.6	1	03.5		58.1	84	13.0		57.7	20	34.1		36.3	128	47.1		22.8						
16	157	45.1	16	03.2		57.2	99	13.6		58.1	35	36.0		36.2	143	49.5		22.8						
17	172	47.5	31	02.9	+16	56.2	114	14.2	+19	58.5	50	37.9	+20	36.1	158	51.8	+3	22.8						
18	187	50.0	46	02.5	+16	55.2	129	14.9	+19	58.9	65	39.8	+20	36.0	173	54.2	+3	22.9						
19	202	52.4	61	02.2		54.3	144	15.5		59.3	80	41.7		35.8	188	56.6		22.9						
20	217	54.9	76	01.9		53.3	159	16.1	+19	59.7	95	43.6		35.7	203	58.9		22.9						
21	232	57.4	91	01.5		52.4	174	16.7	+20	00.1	110	45.5		35.6	219	01.3		23.0						
22	247	59.8	106	01.2		51.4	189	17.3		00.5	125	47.4		35.5	234	03.6		23.0						
23	263	02.3	121	00.9		50.5	204	17.9		00.9	140	49.3		35.4	249	06.0		23.0						
24	278	04.8	136	00.6	+16	49.5	219	18.6	+20	01.3	155	51.2	+20	35.3	264	08.3	+3	23.1						
Dif	—		-3		-9		+6		+4		+19		-1		+24									

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15/7 PMG:12 ^h 03.7 ^m			Edad: 14.9 ^d PHE { 4 ^h : 54/1 12 ^h : 54/2 20 ^h : 54/3 PMG: 0 ^h 05 ^m R°: 50 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°					
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m				
0	179	06.0	+23	10.9	358	47.3	103	-27	13.6	36	60 N	** **	1 01	2 41	22 33	6	1 57 89				
1	194	05.9		10.7	13	16.6	102		10.0	37	58	** **	1 47	3 01	22 09	13	2 29 80				
2	209	05.7		10.6	27	45.8	104		06.3	38	56	** **	2 16	18	21 49	19	2 53 75				
3	224	05.6		10.4	42	15.2	104	-27	02.5	38	54	0 56	38	32	33 22	3	12 72				
4	239	05.5		10.3	56	44.5	103	-26	58.5	40	52	1 39	2 55	44	19 25	28	70				
5	254	05.4	+23	10.1	71	13.9	104	-26	54.4	41	50	2 05	3 10	3 54	21 07	27	3 42 68				
6	269	05.2	+23	10.0	85	43.3	104	-26	50.2	42	45	2 50	3 39	4 17	20 42	31	4 10 64				
7	284	05.1		09.8	100	12.7	104		45.8	44	40	3 20	4 02	34	21 35		33 61				
8	299	05.0		09.7	114	42.2	105		41.3	45	35	3 43	20	4 49	20 05	37	4 51 59				
9	314	04.9		09.5	129	11.7	105		36.7	46	30	4 01	35	5 02	19 50	40	5 07 57				
10	329	04.7		09.3	143	41.2	105		32.0	47	20	30	4 59	24	25 43		33 55				
11	344	04.6	+23	09.2	158	10.8	106	-26	27.1	49	10 N	4 53	5 20	5 43	19 03	47	5 56 52				
12	359	04.5	+23	09.0	172	40.4	106	-26	22.1	50	0	5 11	5 38	6 00	18 43	49	6 17 50				
13	14	04.4		08.9	187	10.1	107		17.0	51	10 S	28	5 54	17	23 52	6	38 48				
14	29	04.3		08.7	201	39.7	106		11.7	53	20	5 44	6 12	36	18 01	55	7 01 45				
15	44	04.1		08.6	216	09.5	108		06.4	55	30	6 00	30	6 57	17 36	58	27 42				
16	59	04.0		08.4	230	39.3	108	-26	00.9	55	35	09	41	7 09	21 60	7	43 40				
17	74	03.9	+23	08.2	245	09.1	108	-25	55.2	57	40	6 18	6 52	7 23	17 04	62	8 00 38				
18	89	03.8	+23	08.1	259	38.9	108	-25	49.5	57	45	6 28	7 06	7 39	16 43	66	8 22 35				
19	104	03.7		07.9	274	08.8	109		43.6	59	50	40	21	8 00	17 70	8	49 31				
20	119	03.5		07.8	288	38.8	110		37.6	60	52	45	29	09	16 04	72	9 02 29				
21	134	03.4		07.6	303	08.8	110		31.5	61	54	51	37	20	15 49	75	17 26				
22	149	03.3		07.4	317	38.8	110		25.3	62	56	6 57	46	33	32 79		35 23				
23	164	03.2		07.3	332	08.9	111		18.9	64	58	7 03	7 56	8 47	15 11	83	9 56 18				
24	179	03.0	+23	07.1	346	39.0	111	-25	12.4	65	60 S	7 11	8 07	9 04	14 44	91	10 23 11				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 5 ^h 26.8 ^m			Mag: -4.1 PMG: 14 ^h 56 ^m			Mag: +1.4 PMG: 9 ^h 22 ^m			Mag: -1.8 PMG: 13 ^h 35 ^m			Mag: +0.8 PMG: 6 ^h 22 ^m								
	hG ♈	Dec		hG ♊	Dec		hG ♊	Dec		hG ♏	Dec		hG ♎	Dec							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	278	04.8	136	00.6	+16	49.5	219	18.6	+20	01.3	155	51.2	+20	35.3	264	08.3	+3	23.1			
1	293	07.2	151	00.2		48.6	234	19.2		01.7	170	53.1		35.2	279	10.7		23.1			
2	308	09.7	165	59.9		47.6	249	19.8		02.1	185	55.0		35.1	294	13.1		23.1			
3	323	12.2	180	59.6		46.6	264	20.4		02.5	200	57.0		35.0	309	15.4		23.2			
4	338	14.6	195	59.2		45.7	279	21.0		02.9	215	58.9		34.9	324	17.8		23.2			
5	353	17.1	210	58.9	+16	44.7	294	21.6	+20	03.2	231	00.8	+20	34.7	339	20.1	+3	23.2			
6	8	19.6	225	58.6	+16	43.8	309	22.3	+20	03.6	246	02.7	+20	34.6	354	22.5	+3	23.3			
7	23	22.0	240	58.3		42.8	324	22.9		04.0	261	04.6		34.5	9	24.8		23.3			
8	38	24.5	255	58.0		41.8	339	23.5		04.4	276	06.5		34.4	24	27.2		23.3			
9	53	26.9	270	57.6		40.9	354	24.1		04.8	291	08.4		34.3	39	29.6		23.4			
10	68	29.4	285	57.3		39.9	9	24.7		05.2	306	10.3		34.2	54	31.9		23.4			
11	83	31.9	300	57.0	+16	38.9	24	25.3	+20	05.6	321	12.2	+20	34.1	69	34.3	+3	23.4			
12	98	34.3	315	56.7	+16	38.0	39	25.9	+20	06.0	336	14.1	+20	34.0	84	36.6	+3	23.5			
13	113	36.8	330	56.3		37.0	54	26.6		06.4	351	16.0		33.9	99	39.0		23.5			
14	128	39.3	345	56.0		36.0	69	27.2		06.8	6	17.9		33.7	114	41.4		23.5			
15	143	41.7	0	55.7		35.1	84	27.8		07.2	21	19.8		33.6	129	43.7		23.5			
16	158	44.2	15	55.4		34.1	99	28.4		07.6	36	21.7		33.5	144	46.1		23.6			
17	173	46.7	30	55.1	+16	33.1	114	29.0	+20	08.0	51	23.6	+20	33.4	159	48.4	+3	23.6			
18	188	49.1	45	54.8	+16	32.2	129	29.6	+20	08.3	66	25.5	+20	33.3	174	50.8	+3	23.6			
19	203	51.6	60	54.4		31.2	144	30.3		08.7	81	27.4		33.2	189	53.2		23.7			
20	218	54.1	75	54.1		30.2	159	30.9		09.1	96	29.3		33.1	204	55.5		23.7			
21	233	56.5	90	53.8		29.3	174	31.5		09.5	111	31.3		33.0	219	57.9		23.7			
22	248	59.0	105	53.5		28.3	189	32.1		09.9	126	33.2		32.8	235	00.2		23.8			
23	264	01.4	120	53.2		27.3	204	32.7		10.3	141	35.1		32.7	250	02.6		23.8			
24	279	03.9	135	52.9	+16	26.3	219	33.3	+20	10.7	156	37.0	+20	32.6	265	05.0	+3	23.8			
Dif	—			-3			+6			+4			+19			-1			+24		

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 03.9 ^m			Edad: 15.9 ^d SD: 14'8 PMG: 0 ^h 55 ^m							Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	03.0	+23	07.1	346	39.0	-25	12.4	60 N	21	25	23	03	**	**	22	39
1	194	02.9		06.9	1	09.2	-25	05.8	58	21	05	22	18	**	**	22	9
2	209	02.8		06.8	15	39.4	-24	59.1	56	20	49	21	50	**	**	22	08
3	224	02.7		06.6	30	09.7		52.3	54	35	29	23	08	**	**	21	55
4	239	02.6		06.4	44	40.0		45.3	52	23	21	11	22	27		44	20
5	254	02.4	+23	06.3	59	10.4	-24	38.3	50	20	13	20	57	22	01	21	34
6	269	02.3	+23	06.1	73	40.8	-24	31.1	45	19	50	20	28	21	17	21	13
7	284	02.2		05.9	88	11.2		23.8	40	33	20	05	20	47		20	56
8	299	02.1		05.8	102	41.8		16.4	35	18	19	48		24		42	34
9	314	02.0		05.6	117	12.3		08.8	30	19	05	33	20	06		30	36
10	329	01.8		05.4	131	43.0	-24	01.2	20	18	44	19	08	19	37	20	08
11	344	01.7	+23	05.3	146	13.6	-23	53.4	10 N	18	25	18	48	19	15	19	50
12	359	01.6	+23	05.1	160	44.4	-23	45.6	0	18	08	18	30	18	56	19	32
13	14	01.5		04.9	175	15.1		37.6	10 S	17	50	18	13	39		19	15
14	29	01.4		04.7	189	46.0		29.5	20	32	17	56		24		18	56
15	44	01.2		04.6	204	16.8		21.3	30	17	11	38	18	07		34	60
16	59	01.1		04.4	218	47.8		13.0	35	16	59	27	17	59		21	62
17	74	01.0	+23	04.2	233	18.8	-23	04.6	40	16	45	17	16	17	50	18	06
18	89	00.9	+23	04.0	247	49.8	-22	56.0	45	16	29	17	02	17	40	17	49
19	104	00.8		03.9	262	20.9		47.4	50	16	08	16	47	28		27	74
20	119	00.7		03.7	276	52.1		38.7	52	15	59	39	23	16	77	9	20
21	134	00.5		03.5	291	23.3		29.8	54	48	31	17		17	04	80	43
22	149	00.4		03.3	305	54.5		20.9	56	35	22	11		16	51	83	9
23	164	00.3		03.1	320	25.8		11.8	58	21	12	17	05		34	88	10
24	179	00.2	+23	03.0	334	57.2	-22	02.7	60 S	15	04	16	01	16	58	16	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 22.9 ^m		Mag: -4.1 PMG: 14 ^h 57 ^m		Mag: +1.4 PMG: 9 ^h 21 ^m		Mag: -1.8 PMG: 13 ^h 32 ^m		Mag: +0.8 PMG: 6 ^h 19 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	279	03.9	135	52.9	+16	26.3	219	33.3	+20	10.7
1	294	06.4	150	52.6		25.4	234	34.0		11.1
2	309	08.8	165	52.3		24.4	249	34.6		11.5
3	324	11.3	180	52.0		23.4	264	35.2		11.8
4	339	13.8	195	51.6		22.4	279	35.8		12.2
5	354	16.2	210	51.3	+16	21.5	294	36.4	+20	12.6
6	9	18.7	225	51.0	+16	20.5	309	37.0	+20	13.0
7	24	21.2	240	50.7		19.5	324	37.6		13.4
8	39	23.6	255	50.4		18.5	339	38.3		13.8
9	54	26.1	270	50.1		17.6	354	38.9		14.2
10	69	28.5	285	49.8		16.6	9	39.5		14.5
11	84	31.0	300	49.5	+16	15.6	24	40.1	+20	14.9
12	99	33.5	315	49.2	+16	14.6	39	40.7	+20	15.3
13	114	35.9	330	48.9		13.6	54	41.3		15.7
14	129	38.4	345	48.6		12.7	69	41.9		16.1
15	144	40.9	0	48.3		11.7	84	42.6		16.5
16	159	43.3	15	48.0		10.7	99	43.2		16.8
17	174	45.8	30	47.7	+16	09.7	114	43.8	+20	17.2
18	189	48.3	45	47.4	+16	08.7	129	44.4	+20	17.6
19	204	50.7	60	47.1		07.7	144	45.0		18.0
20	219	53.2	75	46.8		06.7	159	45.6		18.4
21	234	55.7	90	46.5		05.8	174	46.3		18.7
22	249	58.1	105	46.2		04.8	189	46.9		19.1
23	265	00.6	120	45.9		03.8	204	47.5		19.5
24	280	03.0	135	45.6	+16	02.8	219	48.1	+20	19.9
Dif	—		-3		-10		+6		+4	
									+19	
									-1	
									+24	
									0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG:12 ^h 04.1 ^m			Edad: 16.9 ^d PHE { 4 ^h : 54'6 12 ^h : 54'8 20 ^h : 54'9 PMG: 1 ^h 43 ^m R°: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	° /	° /		° /		° /		°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	179 00.2	+23 03.0		334 57.2		-22 02.7		60 N	** **	1 06	2 43	22 42 1	4 59 92			
1	194 00.1	02.8		349 28.6	124	-21 53.4	93	58	** **	1 50	3 03	30 5	5 16 86			
2	208 59.9	02.6		4 00.1	125	44.1	93	56	** **	2 18	19	20 8	30 82			
3	223 59.8	02.4		18 31.6	125	34.6	95	54	1 00	39	33	10 12	42 78			
4	238 59.7	02.2		33 03.2	126	25.0	96	52	1 41	2 57	45	22 02 14	5 52 76			
5	253 59.6	+23 02.0		47 34.8	126	-21 15.4	96	50	2 07	3 12	3 56	21 55 16	6 01 74			
6	268 59.5	+23 01.9		62 06.5	127	-21 05.6	98	45	2 51	3 41	4 18	21 39 21	6 21 68			
7	283 59.4	01.7		76 38.3	128	-20 55.8	98	40	3 21	4 03	35	26 25	37 64			
8	298 59.2	01.5		91 10.1	128	45.8	100	35	3 44	21	4 50	14 29	6 50 61			
9	313 59.1	01.3		105 41.9	128	35.8	100	30	4 02	4 36	5 03	21 05 31	7 02 58			
10	328 59.0	01.1		120 13.8	129	25.7	101	20	31	5 00	25	20 48 36	22 53			
11	343 58.9	+23 00.9		134 45.8	130	-20 15.4	103	10 N	4 53	5 20	5 43	20 33 40	7 39 49			
12	358 58.8	+23 00.7		149 17.8	130	-20 05.1	103	0	5 12	5 38	6 00	20 19 44	7 55 45			
13	13 58.7	00.5		163 49.8	130	-19 54.7	104	10 S	28	5 55	18	20 05 48	8 11 41			
14	28 58.5	00.3		178 21.9	131	44.2	105	20	5 44	6 12	36	19 49 53	27 38			
15	43 58.4	+23 00.2		192 54.1	132	33.6	106	30	6 00	30	6 57	32 58	47 33			
16	58 58.3	+23 00.0		207 26.3	132	22.9	107	35	09	41	7 09	22 61	8 58 30			
17	73 58.2	+22 59.8		221 58.6	133	-19 12.1	108	40	6 18	6 52	7 23	19 10 64	9 10 28			
18	88 58.1	+22 59.6		236 30.9	133	-19 01.3	108	45	6 28	7 05	7 39	18 56 69	9 25 24			
19	103 58.0	59.4		251 03.3	134	-18 50.3	110	50	40	21	7 59	40 73	44 18			
20	118 57.8	59.2		265 35.7	134	39.3	110	52	45	28	8 09	32 75	9 52 16			
21	133 57.7	59.0		280 08.2	135	28.1	112	54	50	36	20	23 78	10 02 13			
22	148 57.6	58.8		294 40.7	135	16.9	112	56	6 56	45	32	13 82	12 11			
23	163 57.5	58.6		309 13.2	135	-18 05.6	113	58	7 03	7 55	8 46	18 01 86	25 6			
24	178 57.4	+22 58.4		323 45.9	137	-17 54.3	113	60 S	7 10	8 06	9 03	17 48 90	10 39 2			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 5 ^h 18.9 ^m		Mag: -4.1 PMG: 14 ^h 57 ^m		Mag: +1.4 PMG: 9 ^h 20 ^m		Mag: -1.8 PMG: 13 ^h 29 ^m		Mag: +0.8 PMG: 6 ^h 15 ^m							
	hG ♈	Dec	hG ♊	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /						
0	280 03.0	135 45.6	+16 02.8		219 48.1	+20 19.9	157 22.7	+20 29.9	266 01.6	+3 24.6						
1	295 05.5	150 45.3	01.8		234 48.7	20.3	172 24.6	29.8	281 04.0	24.6						
2	310 08.0	165 45.0	+16 00.8		249 49.3	20.6	187 26.5	29.7	296 06.4	24.6						
3	325 10.4	180 44.7	+15 59.8		264 49.9	21.0	202 28.4	29.6	311 08.7	24.7						
4	340 12.9	195 44.4	58.8		279 50.6	21.4	217 30.3	29.5	326 11.1	24.7						
5	355 15.4	210 44.2	+15 57.8		294 51.2	+20 21.8	232 32.2	+20 29.4	341 13.5	+3 24.7						
6	10 17.8	225 43.9	+15 56.9		309 51.8	+20 22.2	247 34.1	+20 29.3	356 15.8	+3 24.7						
7	25 20.3	240 43.6	55.9		324 52.4	22.5	262 36.0	29.1	11 18.2	24.8						
8	40 22.8	255 43.3	54.9		339 53.0	22.9	277 37.9	29.0	26 20.6	24.8						
9	55 25.2	270 43.0	53.9		354 53.6	23.3	292 39.8	28.9	41 22.9	24.8						
10	70 27.7	285 42.7	52.9		9 54.2	23.7	307 41.7	28.8	56 25.3	24.9						
11	85 30.2	300 42.4	+15 51.9		24 54.9	+20 24.0	322 43.6	+20 28.7	71 27.7	+3 24.9						
12	100 32.6	315 42.1	+15 50.9		39 55.5	+20 24.4	337 45.5	+20 28.6	86 30.0	+3 24.9						
13	115 35.1	330 41.9	49.9		54 56.1	24.8	352 47.4	28.5	101 32.4	24.9						
14	130 37.5	345 41.6	48.9		69 56.7	25.2	7 49.3	28.4	116 34.8	25.0						
15	145 40.0	0 41.3	47.9		84 57.3	25.5	22 51.2	28.2	131 37.1	25.0						
16	160 42.5	15 41.0	46.9		99 57.9	25.9	37 53.1	28.1	146 39.5	25.0						
17	175 44.9	30 40.7	+15 45.9		114 58.5	+20 26.3	52 55.0	+20 28.0	161 41.9	+3 25.1						
18	190 47.4	45 40.4	+15 44.9		129 59.2	+20 26.7	67 56.9	+20 27.9	176 44.2	+3 25.1						
19	205 49.9	60 40.2	43.9		144 59.8	27.0	82 58.8	27.8	191 46.6	25.1						
20	220 52.3	75 39.9	42.9		160 00.4	27.4	98 00.7	27.7	206 49.0	25.1						
21	235 54.8	90 39.6	41.9		175 01.0	27.8	113 02.6	27.6	221 51.3	25.2						
22	250 57.3	105 39.3	40.9		190 01.6	28.2	128 04.6	27.4	236 53.7	25.2						
23	265 59.7	120 39.0	39.9		205 02.2	28.5	143 06.5	27.3	251 56.1	25.2						
24	281 02.2	135 38.8	+15 38.9		220 02.8	+20 28.9	158 08.4	+20 27.2	266 58.4	+3 25.3						
Dif	—	-3	-10		+6	+4	+19	-1	+24	0						

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG:12 ^h 04.3 ^m			Edad: 17.9 ^d SD: 15'0 PMG: 2 ^h 29 ^m PHE { 4 ^h : 55'0 12 ^h : 55'2 20 ^h : 55'3 Rº: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	178	57.4	+22	58.4	323	45.9	-17	54.3	60 N	21 23	22 58	** **	22 43	1	6 31	91		
1	193	57.3		58.2	338	18.5	136	42.8	58	21 04	22 16	** **	35	5	42	87		
2	208	57.1		58.0	352	51.2	137	31.3	56	20 48	21 48	** **	28	8	6 52	83		
3	223	57.0		57.8	7	24.0	138	19.6	54	34	27	23 04	22 11	7 00	80			
4	238	56.9		57.6	21	56.8	138	-17	52	22	21 10	22 25	16 14	08	77			
5	253	56.8	+22	57.4	36	29.6	138	-16	50	20 12	20 56	21 59	22 11	16	7 15	74		
6	268	56.7	+22	57.2	51	02.5	139	-16	45	19 50	20 27	21 16	22 00	20	7 29	70		
7	283	56.6		57.0	65	35.5	140	32.4	40	32	20 05	20 46	21 51	24	41	65		
8	298	56.5		56.8	80	08.5	140	20.4	35	18	19 47	24	43	28	7 51	62		
9	313	56.3		56.6	94	41.5	140	-16	30	19 05	32	20 06	36 31	8 00	59			
10	328	56.2		56.4	109	14.5	140	-15	20	18 44	19 08	19 37	24 36	15	54			
11	343	56.1	+22	56.2	123	47.7	142	-15	10 N	18 25	18 48	19 15	21 13	40	8 28	49		
12	358	56.0	+22	56.0	138	20.8	141	-15	0	18 08	18 30	18 56	21 03	45	8 40	45		
13	13	55.9		55.8	152	54.0	142	19.2	10 S	17 51	18 14	40	20 53	49	8 52	41		
14	28	55.8		55.6	167	27.2	142	-15	20	33	17 57	24	42	54	9 05	37		
15	43	55.7		55.3	182	00.5	143	-14	30	12	38	08	30	58	20	31		
16	58	55.5		55.1	196	33.8	143	41.7	35	17 00	28	18 00	23 61	28	29			
17	73	55.4	+22	54.9	211	07.2	144	-14	40	16 46	17 17	17 51	20 14	66	9 38	25		
18	88	55.3	+22	54.7	225	40.6	144	-14	45	16 30	17 03	17 41	20 05	69	9 49	21		
19	103	55.2		54.5	240	14.0	144	-14	50	10	16 48	29	19 53	74	10 02	16		
20	118	55.1		54.3	254	47.5	145	-13	52	16 00	41	24	47	77	08	14		
21	133	55.0		54.1	269	21.0	145	37.7	54	15 49	33	19	41	80	15	12		
22	148	54.9		53.9	283	54.5	145	24.7	56	37	24	13	35	82	23	8		
23	163	54.8		53.7	298	28.0	145	-13	58	23	14	17 06	27	86	31	6		
24	178	54.6	+22	53.4	313	01.6	146	-12	60 S	15 06	16 03	16 59	19 18	91	10 41	2		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 5 ^h 15.0 ^m		Mag: -4.1 PMG: 14 ^h 58 ^m			Mag: +1.4 PMG: 9 ^h 19 ^m			Mag: -1.8 PMG: 13 ^h 26 ^m			Mag: +0.8 PMG: 6 ^h 11 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	281	02.2	135	38.8	+15	38.9	220	02.8	+20	28.9	158	08.4	+20	27.2	266	58.4	+3	25.3
1	296	04.7	150	38.5		37.9	235	03.4		29.3	173	10.3		27.1	282	00.8		25.3
2	311	07.1	165	38.2		36.9	250	04.1		29.6	188	12.2		27.0	297	03.2		25.3
3	326	09.6	180	37.9		35.9	265	04.7		30.0	203	14.1		26.9	312	05.5		25.3
4	341	12.0	195	37.7		34.9	280	05.3		30.4	218	16.0		26.8	327	07.9		25.4
5	356	14.5	210	37.4	+15	33.9	295	05.9	+20	30.8	233	17.9	+20	26.7	342	10.3	+3	25.4
6	11	17.0	225	37.1	+15	32.9	310	06.5	+20	31.1	248	19.8	+20	26.5	357	12.6	+3	25.4
7	26	19.4	240	36.8		31.9	325	07.1		31.5	263	21.7		26.4	12	15.0		25.4
8	41	21.9	255	36.6		30.8	340	07.7		31.9	278	23.6		26.3	27	17.4		25.5
9	56	24.4	270	36.3		29.8	355	08.4		32.2	293	25.5		26.2	42	19.7		25.5
10	71	26.8	285	36.0		28.8	10	09.0		32.6	308	27.4		26.1	57	22.1		25.5
11	86	29.3	300	35.8	+15	27.8	25	09.6	+20	33.0	323	29.3	+20	26.0	72	24.5	+3	25.6
12	101	31.8	315	35.5	+15	26.8	40	10.2	+20	33.3	338	31.2	+20	25.9	87	26.9	+3	25.6
13	116	34.2	330	35.2		25.8	55	10.8		33.7	353	33.1		25.7	102	29.2		25.6
14	131	36.7	345	35.0		24.8	70	11.4		34.1	8	35.0		25.6	117	31.6		25.6
15	146	39.1	0	34.7		23.8	85	12.0		34.4	23	36.9		25.5	132	34.0		25.7
16	161	41.6	15	34.4		22.8	100	12.6		34.8	38	38.8		25.4	147	36.3		25.7
17	176	44.1	30	34.2	+15	21.7	115	13.3	+20	35.2	53	40.7	+20	25.3	162	38.7	+3	25.7
18	191	46.5	45	33.9	+15	20.7	130	13.9	+20	35.5	68	42.6	+20	25.2	177	41.1	+3	25.7
19	206	49.0	60	33.6		19.7	145	14.5		35.9	83	44.5		25.1	192	43.4		25.8
20	221	51.5	75	33.4		18.7	160	15.1		36.3	98	46.4		24.9	207	45.8		25.8
21	236	53.9	90	33.1		17.7	175	15.7		36.6	113	48.3		24.8	222	48.2		25.8
22	251	56.4	105	32.8		16.7	190	16.3		37.0	128	50.2		24.7	237	50.6		25.9
23	266	58.9	120	32.6		15.7	205	16.9		37.3	143	52.1		24.6	252	52.9		25.9
24	282	01.3	135	32.3	+15	14.6	220	17.6	+20	37.7	158	54.0	+20	24.5	267	55.3	+3	25.9
Dif	—		-3		-10		+6		+4		+19		-1		+24		0	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/7 PMG:12 ^h 04.4 ^m				Edad: 18.9 ^d PHE { SD: 15/1 PMG: 3 ^h 14 ^m 4 ^h : 55/5 12 ^h : 55/7 20 ^h : 55/8 R°: 42 ^m														
	hG ☉		Dec		hG ☾		Dif		Dec			Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	178	54.6	+22	53.4	313	01.6	-12	58.5	131	60 N	** **	1 11	2 46	22 43	0	8 01	88		
1	193	54.5		53.2	327	35.3		45.4	131	58	** **	1 53	3 05	39	3	08	84		
2	208	54.4		53.0	342	08.9		32.1	133	56	** **	2 21	21	35	6	14	81		
3	223	54.3		52.8	356	42.6		18.8	133	54	1 05	42	35	31	9	19	78		
4	238	54.2		52.6	11	16.3	-12	05.5	133	52	1 44	2 59	47	28	11	24	75		
5	253	54.1	+22	52.4	25	50.1	-11	52.1	134	50	2 10	3 13	3 57	22 25	13	8 28	73		
6	268	54.0	+22	52.1	40	23.8	-11	38.6	135	45	2 53	3 42	4 19	22 19	18	8 37	68		
7	283	53.9		51.9	54	57.6		25.1	135	40	3 23	4 04	36	14	22	45	64		
8	298	53.8		51.7	69	31.5	-11	11.5	136	35	3 45	22	4 51	09	25	52	60		
9	313	53.6		51.5	84	05.3	-10	57.8	137	30	4 03	4 36	5 04	22 05	29	8 57	58		
10	328	53.5		51.3	98	39.2		44.1	137	20	32	5 01	25	21 58	34	9 07	52		
11	343	53.4	+22	51.0	113	13.1	-10	30.4	137	10 N	4 54	5 21	5 44	21 52	38	9 16	47		
12	358	53.3	+22	50.8	127	47.0	-10	16.6	138	0	5 12	5 38	6 01	21 46	43	9 24	43		
13	13	53.2		50.6	142	21.0	-10	02.7	139	10 S	29	5 55	18	40	48	32	38		
14	28	53.1		50.4	156	54.9	-9	48.8	139	20	5 45	6 12	36	34	52	40	34		
15	43	53.0		50.1	171	28.9		34.9	139	30	6 00	30	6 56	27	57	50	28		
16	58	52.9		49.9	186	02.9		20.9	140	35	09	40	7 08	23	60	9 55	26		
17	73	52.8	+22	49.7	200	36.9	-9	06.8	141	40	6 18	6 52	7 22	21 18	64	10 01	23		
18	88	52.6	+22	49.5	215	10.9	-8	52.7	141	45	6 28	7 05	7 39	21 13	68	10 09	18		
19	103	52.5		49.2	229	45.0		38.6	141	50	39	21	7 59	06	74	17	13		
20	118	52.4		49.0	244	19.0		24.4	142	52	44	28	8 08	03	76	21	11		
21	133	52.3		48.8	258	53.1	-8	10.1	143	54	50	36	19	21 00	78	25	9		
22	148	52.2		48.5	273	27.2	-7	55.8	143	56	6 56	44	31	20 56	81	30	6		
23	163	52.1		48.3	288	01.3		41.5	143	58	7 02	7 54	8 45	52	84	35	3		
24	178	52.0	+22	48.1	302	35.4	-7	27.1	144	60 S	7 09	8 05	9 02	20 47	88	10 41	0		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 5 ^h 11.1 ^m		Mag: -4.1 PMG: 14 ^h 58 ^m			Mag: +1.4 PMG: 9 ^h 18 ^m			Mag: -1.8 PMG: 13 ^h 23 ^m			Mag: +0.8 PMG: 6 ^h 07 ^m							
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	282	01.3	135	32.3	+15	14.6	220	17.6	+20	37.7	158	54.0	+20	24.5	267	55.3	+3	25.9	
1	297	03.8	150	32.1		13.6	235	18.2		38.1	173	55.9		24.4	282	57.7		25.9	
2	312	06.3	165	31.8		12.6	250	18.8		38.4	188	57.8		24.3	298	00.0		26.0	
3	327	08.7	180	31.5		11.6	265	19.4		38.8	203	59.7		24.1	313	02.4		26.0	
4	342	11.2	195	31.3		10.6	280	20.0		39.2	219	01.6		24.0	328	04.8		26.0	
5	357	13.6	210	31.0	+15	09.5	295	20.6	+20	39.5	234	03.5	+20	23.9	343	07.2	+3	26.1	
6	12	16.1	225	30.8	+15	08.5	310	21.2	+20	39.9	249	05.4	+20	23.8	358	09.5	+3	26.1	
7	27	18.6	240	30.5		07.5	325	21.8		40.2	264	07.3		23.7	13	11.9		26.1	
8	42	21.0	255	30.3		06.5	340	22.5		40.6	279	09.2		23.6	28	14.3		26.1	
9	57	23.5	270	30.0		05.5	355	23.1		41.0	294	11.1		23.4	43	16.7		26.1	
10	72	26.0	285	29.7		04.4	10	23.7		41.3	309	13.0		23.3	58	19.0		26.2	
11	87	28.4	300	29.5	+15	03.4	25	24.3	+20	41.7	324	14.9	+20	23.2	73	21.4	+3	26.2	
12	102	30.9	315	29.2	+15	02.4	40	24.9	+20	42.0	339	16.8	+20	23.1	88	23.8	+3	26.2	
13	117	33.4	330	29.0		01.4	55	25.5		42.4	354	18.7		23.0	103	26.1		26.2	
14	132	35.8	345	28.7	+15	00.3	70	26.1		42.8	9	20.6		22.9	118	28.5		26.3	
15	147	38.3	0	28.5	+14	59.3	85	26.7		43.1	24	22.5		22.8	133	30.9		26.3	
16	162	40.8	15	28.2		58.3	100	27.4		43.5	39	24.4		22.6	148	33.3		26.3	
17	177	43.2	30	28.0	+14	57.3	115	28.0	+20	43.8	54	26.3	+20	22.5	163	35.6	+3	26.3	
18	192	45.7	45	27.7	+14	56.2	130	28.6	+20	44.2	69	28.2	+20	22.4	178	38.0	+3	26.4	
19	207	48.1	60	27.5		55.2	145	29.2		44.5	84	30.1		22.3	193	40.4		26.4	
20	222	50.6	75	27.3		54.2	160	29.8		44.9	99	32.0		22.2	208	42.8		26.4	
21	237	53.1	90	27.0		53.1	175	30.4		45.3	114	33.9		22.1	223	45.1		26.4	
22	252	55.5	105	26.8		52.1	190	31.0		45.6	129	35.8		22.0	238	47.5		26.5	
23	267	58.0	120	26.5		51.1	205	31.6		46.0	144	37.7		21.8	253	49.9		26.5	
24	283	00.5	135	26.3	+14	50.0	220	32.3	+20	46.3	159	39.7	+20	21.7	268	52.3	+3	26.5	
Dif	—		-3			-10	+6		+4		+19		-1		+24		0		

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 04.6 ^m			Edad: 19.9 ^d PHE { 4 ^h : 56'0 12 ^h : 56'2 20 ^h : 56'5 PMG: 3 ^h 56 ^m R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Civil			Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	178	52.0	+22	48.1	302	35.4	151	-7	27.1	60 N	21 21	22 53	** **	22 43	1	9 29 90		
1	193	51.9		47.8	317	09.5	151	-7	12.7	58	21 02	22 13	** **	42	4	32 87		
2	208	51.8		47.6	331	43.6	151	-6	58.3	56	20 47	21 46	** **	41	7	35 83		
3	223	51.7		47.4	346	17.7	151		43.8	54	33	26	22 59	40	10	37 88		
4	238	51.6		47.2	0	51.8	151		29.3	52	21	21 09	22 22	39	12	39 78		
5	253	51.4	+22	46.9	15	26.0	152	-6	14.7	50	20 11	20 55	21 57	22 38	15	9 41 76		
6	268	51.3	+22	46.7	30	00.1	151	-6	00.1	45	19 49	20 26	21 15	22 37	19	9 45 71		
7	283	51.2		46.4	44	34.2	151	-5	45.4	40	32	20 04	20 46	36	23	49 66		
8	298	51.1		46.2	59	08.4	152		30.7	35	18	19 47	23	34	27	52 62		
9	313	51.0		46.0	73	42.5	151		16.0	30	19 05	32	20 05	34	30	55 59		
10	328	50.9		45.7	88	16.6	151	-5	01.3	20	18 44	19 08	19 37	32	35	9 59 54		
11	343	50.8	+22	45.5	102	50.8	152	-4	46.5	10 N	18 25	18 48	19 15	22 30	41	10 03 49		
12	358	50.7	+22	45.3	117	24.9	151	-4	31.7	0	18 08	18 31	18 57	22 29	45	10 07 44		
13	13	50.6		45.0	131	59.0	151		16.8	10 S	17 51	18 14	40	28	49	10 40		
14	28	50.5		44.8	146	33.1	151	-4	02.0	20	33	17 57	25	26	55	14 35		
15	43	50.4		44.5	161	07.3	152	-3	47.1	30	13	39	09	24	60	18 30		
16	58	50.3		44.3	175	41.4	151		32.1	35	17 01	29	18 01	23	64	21 26		
17	73	50.2	+22	44.0	190	15.4	150	-3	17.2	40	16 47	17 18	17 52	22 22	67	10 24 23		
18	88	50.1	+22	43.8	204	49.5	151	-3	02.2	45	16 31	17 05	17 42	22 21	72	10 27 19		
19	103	49.9		43.6	219	23.6	151	-2	47.1	50	11	16 49	30	20	76	30 15		
20	118	49.8		43.3	233	57.6	150		32.1	52	16 02	42	25	19	79	32 12		
21	133	49.7		43.1	248	31.7	151		17.0	54	15 51	34	20	18	82	34 10		
22	148	49.6		42.8	263	05.7	150	-2	01.9	56	39	26	14	17	85	36 7		
23	163	49.5		42.6	277	39.7	150	-1	46.8	58	25	16	08	16	88	38 5		
24	178	49.4	+22	42.3	292	13.7	150	-1	31.7	60 S	15 09	16 05	17 01	22 15	92	10 41 1		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 5 ^h 07.1 ^m		Mag: -4.1 PMG: 14 ^h 58 ^m			Mag: +1.4 PMG: 9 ^h 17 ^m			Mag: -1.8 PMG: 13 ^h 20 ^m			Mag: +0.8 PMG: 6 ^h 04 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	283	00.5	135	26.3	+14	50.0	220	32.3	+20	46.3	159	39.7	+20	21.7	268	52.3	+3	26.5
1	298	02.9	150	26.0		49.0	235	32.9		46.7	174	41.6		21.6	283	54.6		26.5
2	313	05.4	165	25.8		48.0	250	33.5		47.0	189	43.5		21.5	298	57.0		26.6
3	328	07.9	180	25.5		47.0	265	34.1		47.4	204	45.4		21.4	313	59.4		26.6
4	343	10.3	195	25.3		45.9	280	34.7		47.7	219	47.3		21.3	329	01.8		26.6
5	358	12.8	210	25.1	+14	44.9	295	35.3	+20	48.1	234	49.2	+20	21.1	344	04.1	+3	26.6
6	13	15.2	225	24.8	+14	43.8	310	35.9	+20	48.4	249	51.1	+20	21.0	359	06.5	+3	26.7
7	28	17.7	240	24.6		42.8	325	36.5		48.8	264	53.0		20.9	14	08.9		26.7
8	43	20.2	255	24.3		41.8	340	37.1		49.1	279	54.9		20.8	29	11.3		26.7
9	58	22.6	270	24.1		40.7	355	37.8		49.5	294	56.8		20.7	44	13.6		26.7
10	73	25.1	285	23.9		39.7	10	38.4		49.9	309	58.7		20.6	59	16.0		26.8
11	88	27.6	300	23.6	+14	38.7	25	39.0	+20	50.2	325	00.6	+20	20.4	74	18.4	+3	26.8
12	103	30.0	315	23.4	+14	37.6	40	39.6	+20	50.6	340	02.5	+20	20.3	89	20.8	+3	26.8
13	118	32.5	330	23.2		36.6	55	40.2		50.9	355	04.4		20.2	104	23.2		26.8
14	133	35.0	345	22.9		35.6	70	40.8		51.3	10	06.3		20.1	119	25.5		26.9
15	148	37.4	0	22.7		34.5	85	41.4		51.6	25	08.2		20.0	134	27.9		26.9
16	163	39.9	15	22.5		33.5	100	42.0		52.0	40	10.1		19.9	149	30.3		26.9
17	178	42.4	30	22.2	+14	32.4	115	42.7	+20	52.3	55	12.0	+20	19.8	164	32.7	+3	26.9
18	193	44.8	45	22.0	+14	31.4	130	43.3	+20	52.6	70	13.9	+20	19.6	179	35.0	+3	27.0
19	208	47.3	60	21.8		30.3	145	43.9		53.0	85	15.8		19.5	194	37.4		27.0
20	223	49.7	75	21.5		29.3	160	44.5		53.3	100	17.7		19.4	209	39.8		27.0
21	238	52.2	90	21.3		28.3	175	45.1		53.7	115	19.6		19.3	224	42.2		27.0
22	253	54.7	105	21.1		27.2	190	45.7		54.0	130	21.5		19.2	239	44.6		27.1
23	268	57.1	120	20.9		26.2	205	46.3		54.4	145	23.4		19.1	254	46.9		27.1
24	283	59.6	135	20.6	+14	25.1	220	46.9	+20	54.7	160	25.3	+20	18.9	269	49.3	+3	27.1
Dif	—		-2	-10			+6	+4			+19	-1			+24			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/7 PMG:12 ^h 04.8 ^m				Edad: 20.9 ^d PHE { 4 ^h : 56/7 12 ^h : 56/9 20 ^h : 57/2 PMG: 4 ^h 39 ^m R°: 44 ^m													
	hG ☉	Dec			hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	178	49.4	+22	42.3	292	13.7	-1	31.7	60 N	** **	1 17	2 48	22 42	1	10 58	92		
1	193	49.3		42.1	306	47.6		16.5	58	** **	1 57	3 07	45	3	57	88		
2	208	49.2		41.8	321	21.6	-1	01.4	56	** **	2 23	23	47	6	57	84		
3	223	49.1		41.6	335	55.5	-0	46.2	54	1 10	2 44	37	48	10	56	82		
4	238	49.0		41.3	350	29.4		31.0	52	1 47	3 01	48	50	12	56	79		
5	253	48.9	+22	41.1	5	03.3	-0	15.7	50	2 12	3 15	3 59	22 52	14	10 55	77		
6	268	48.8	+22	40.8	19	37.1	-0	00.5	45	2 55	3 43	4 20	22 55	19	10 54	71		
7	283	48.7		40.6	34	10.9	+0	14.8	40	3 24	4 05	38	22 58	23	54	66		
8	298	48.6		40.3	48	44.7		30.0	35	3 46	23	4 52	23 00	27	53	63		
9	313	48.5		40.1	63	18.5	+0	45.3	30	4 04	4 37	5 05	02	31	52	60		
10	328	48.4		39.8	77	52.2	+1	00.6	20	32	5 01	26	06	36	51	54		
11	343	48.3	+22	39.6	92	25.9	+1	15.9	10 N	4 54	5 21	5 44	23 09	41	10 50	49		
12	358	48.2	+22	39.3	106	59.6	+1	31.2	0	5 13	5 39	6 01	23 12	46	10 49	45		
13	13	48.1		39.0	121	33.2	+1	46.6	10 S	29	5 55	18	16	50	49	39		
14	28	48.0		38.8	136	06.8	+2	01.9	20	5 45	6 12	36	19	55	48	34		
15	43	47.9		38.5	150	40.3		17.3	30	6 00	30	6 56	23	61	47	29		
16	58	47.7		38.3	165	13.8		32.6	35	09	40	7 08	25	65	46	26		
17	73	47.6	+22	38.0	179	47.3	+2	48.0	40	6 18	6 52	7 22	23 28	68	10 45	23		
18	88	47.5	+22	37.8	194	20.7	+3	03.3	45	6 28	7 04	7 38	23 31	73	10 44	19		
19	103	47.4		37.5	208	54.1		18.7	50	39	20	7 58	35	78	43	14		
20	118	47.3		37.2	223	27.4		34.0	52	44	27	8 07	37	80	43	11		
21	133	47.2		37.0	238	00.7	+3	49.4	54	49	35	18	38	84	42	9		
22	148	47.1		36.7	252	33.9	+4	04.8	56	6 55	43	30	41	86	42	6		
23	163	47.0		36.4	267	07.1		20.1	58	7 01	7 53	8 44	43	90	41	3		
24	178	46.9	+22	36.2	281	40.3	+4	35.5	60 S	7 08	8 04	9 00	23 45	95	10 41	**		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 5 ^h 03.2 ^m		Mag: -4.1 PMG: 14 ^h 59 ^m			Mag: +1.4 PMG: 9 ^h 16 ^m			Mag: -1.8 PMG: 13 ^h 17 ^m			Mag: +0.8 PMG: 6 ^h 00 ^m						
	hG ♀		hG ♀	Dec		hG ♂	Dec		hG ♀	Dec		hG ♀	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	283	59.6	135	20.6	+14	25.1	220	46.9	+20	54.7	160	25.3	+20	18.9	269	49.3	+3	27.1
1	299	02.1	150	20.4		24.1	235	47.5		55.1	175	27.2		18.8	284	51.7		27.1
2	314	04.5	165	20.2		23.0	250	48.2		55.4	190	29.1		18.7	299	54.1		27.1
3	329	07.0	180	20.0		22.0	265	48.8		55.8	205	31.0		18.6	314	56.4		27.2
4	344	09.5	195	19.7		20.9	280	49.4		56.1	220	32.9		18.5	329	58.8		27.2
5	359	11.9	210	19.5	+14	19.9	295	50.0	+20	56.5	235	34.8	+20	18.4	345	01.2	+3	27.2
6	14	14.4	225	19.3	+14	18.9	310	50.6	+20	56.8	250	36.7	+20	18.2	0	03.6	+3	27.2
7	29	16.9	240	19.1		17.8	325	51.2		57.1	265	38.6		18.1	15	06.0		27.3
8	44	19.3	255	18.8		16.8	340	51.8		57.5	280	40.5		18.0	30	08.3		27.3
9	59	21.8	270	18.6		15.7	355	52.4		57.8	295	42.4		17.9	45	10.7		27.3
10	74	24.2	285	18.4		14.7	10	53.0		58.2	310	44.3		17.8	60	13.1		27.3
11	89	26.7	300	18.2	+14	13.6	25	53.7	+20	58.5	325	46.2	+20	17.7	75	15.5	+3	27.4
12	104	29.2	315	18.0	+14	12.6	40	54.3	+20	58.9	340	48.1	+20	17.5	90	17.9	+3	27.4
13	119	31.6	330	17.7		11.5	55	54.9		59.2	355	50.0		17.4	105	20.2		27.4
14	134	34.1	345	17.5		10.5	70	55.5		59.5	10	51.9		17.3	120	22.6		27.4
15	149	36.6	0	17.3		09.4	85	56.1	+20	59.9	25	53.8		17.2	135	25.0		27.4
16	164	39.0	15	17.1		08.3	100	56.7	+21	00.2	40	55.7		17.1	150	27.4		27.5
17	179	41.5	30	16.9	+14	07.3	115	57.3	+21	00.6	55	57.6	+20	17.0	165	29.8	+3	27.5
18	194	44.0	45	16.7	+14	06.2	130	57.9	+21	00.9	70	59.5	+20	16.8	180	32.2	+3	27.5
19	209	46.4	60	16.5		05.2	145	58.5		01.2	86	01.4		16.7	195	34.5		27.5
20	224	48.9	75	16.2		04.1	160	59.2		01.6	101	03.3		16.6	210	36.9		27.6
21	239	51.3	90	16.0		03.1	175	59.8		01.9	116	05.2		16.5	225	39.3		27.6
22	254	53.8	105	15.8		02.0	191	00.4		02.3	131	07.1		16.4	240	41.7		27.6
23	269	56.3	120	15.6	+14	01.0	206	01.0		02.6	146	09.0		16.3	255	44.1		27.6
24	284	58.7	135	15.4	+13	59.9	221	01.6	+21	02.9	161	10.9	+20	16.1	270	46.4	+3	27.6
Dif	—		-2		-11		+6		+3		+19		-1		+24		0	

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG:12 ^h 05.0 ^m				Edad: 21.9 ^d SD: 15'6 PMG: 5 ^h 23 ^m PHE { 4 ^h : 57'4 12 ^h : 57'7 20 ^h : 57'9 Rº: 48 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	Rº	Hora	Rº
h	° /	° /	° /		° /		°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	178 46.9	+22 36.2	281 40.3		+4 35.5		60 N	21 19	22 48	** **	22 43 2	12 30 98				
1	193 46.8		296 13.3	140	+4 50.8	153	58	21 00	22 10	** **	48 7	25 95				
2	208 46.7		310 46.4	141	+5 06.2	154	56	20 45	21 44	** **	53 11	21 91				
3	223 46.6		325 19.4	140		21.5	54	32	24	22 54	22 58 13	18 87				
4	238 46.5		339 52.3	139		36.9	52	20	21 07	22 19	23 02 16	15 84				
5	253 46.4	+22 34.8	354 25.1	138	+5 52.2	153	50	20 10	20 53	21 55	23 06 19	12 12 81				
6	268 46.3	+22 34.6	8 57.9	138	+6 07.5	153	45	19 49	20 25	21 13	23 14 24	12 05 77				
7	283 46.2		23 30.7	138		22.8	40	31	20 04	20 45	21 29 12	00 72				
8	298 46.1		38 03.4	137		38.1	35	17	19 46	23	27 33	11 56 67				
9	313 46.0		52 36.0	136	+6 53.4	153	30	19 05	32	20 05	33 35	52 64				
10	328 45.9		67 08.5	135	+7 08.7	153	20	18 44	19 08	19 37	42 41	45 59				
11	343 45.8	+22 33.2	81 41.0	135	+7 24.0	153	10 N	18 25	18 48	19 15	23 50 46	11 39 54				
12	358 45.7	+22 33.0	96 13.4	134	+7 39.2	152	0	18 09	18 31	18 57	23 58 51	11 34 48				
13	13 45.6		110 45.8	134	+7 54.4	152	10 S	17 52	18 15	41	** ** *	28 44				
14	28 45.5		125 18.1	133	+8 09.6	152	20	34	17 58	25	** ** *	22 39				
15	43 45.4		139 50.3	132		24.8	30	14	40	10	** ** *	16 33				
16	58 45.3		154 22.4	131		40.0	35	17 02	30	18 01	** ** *	12 30				
17	73 45.2	+22 31.6	168 54.5	131	+8 55.1	151	40	16 49	17 19	17 53	** ** *	11 08 26				
18	88 45.1	+22 31.3	183 26.4	129	+9 10.2	151	45	16 33	17 06	17 43	** ** *	11 03 22				
19	103 45.0		197 58.3	129		25.3	50	13	16 51	32	** ** *	10 57 17				
20	118 44.9		212 30.2	129		40.4	52	16 04	44	27	** ** *	54 14				
21	133 44.8		30.5 227 01.9	127	+9 55.4	150	54	15 53	36	22	** ** *	51 12				
22	148 44.7		30.2 241 33.6	127	+10 10.4	150	56	41	28	16	** ** *	48 9				
23	163 44.6		256 05.1	125		25.4	58	28	18	10	** ** *	44 6				
24	178 44.5	+22 29.6	270 36.6	125	+10 40.3	149	60 S	15 11	16 07	17 03	** ** *	10 40 2				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 4 ^h 59.3 ^m		Mag: -4.1 PMG: 14 ^h 59 ^m		Mag: +1.4 PMG: 9 ^h 16 ^m		Mag: -1.8 PMG: 13 ^h 14 ^m		Mag: +0.7 PMG: 5 ^h 56 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	° /	° /	° /		° /		° /		° /							
0	284 58.7	135 15.4	+13 59.9		221 01.6	+21 02.9	161 10.9	+20 16.1	270 46.4	+3 27.6						
1	300 01.2	150 15.2		58.8	236 02.2	03.3	176 12.8	16.0	285 48.8	27.7						
2	315 03.7	165 15.0		57.8	251 02.8	03.6	191 14.7	15.9	300 51.2	27.7						
3	330 06.1	180 14.8		56.7	266 03.4	04.0	206 16.6	15.8	315 53.6	27.7						
4	345 08.6	195 14.6		55.7	281 04.0	04.3	221 18.5	15.7	330 56.0	27.7						
5	0 11.1	210 14.4	+13 54.6		296 04.7	+21 04.6	236 20.4	+20 15.5	345 58.4	+3 27.7						
6	15 13.5	225 14.1	+13 53.5		311 05.3	+21 05.0	251 22.3	+20 15.4	1 00.7	+3 27.8						
7	30 16.0	240 13.9		52.5	326 05.9	05.3	266 24.2	15.3	16 03.1	27.8						
8	45 18.5	255 13.7		51.4	341 06.5	05.6	281 26.1	15.2	31 05.5	27.8						
9	60 20.9	270 13.5		50.4	356 07.1	06.0	296 28.0	15.1	46 07.9	27.8						
10	75 23.4	285 13.3		49.3	11 07.7	06.3	311 29.9	15.0	61 10.3	27.9						
11	90 25.8	300 13.1	+13 48.2		26 08.3	+21 06.6	326 31.8	+20 14.8	76 12.7	+3 27.9						
12	105 28.3	315 12.9	+13 47.2		41 08.9	+21 07.0	341 33.7	+20 14.7	91 15.0	+3 27.9						
13	120 30.8	330 12.7		46.1	56 09.5	07.3	356 35.6	14.6	106 17.4	27.9						
14	135 33.2	345 12.5		45.0	71 10.2	07.6	11 37.5	14.5	121 19.8	27.9						
15	150 35.7	0 12.3		44.0	86 10.8	08.0	26 39.4	14.4	136 22.2	28.0						
16	165 38.2	15 12.1		42.9	101 11.4	08.3	41 41.2	14.3	151 24.6	28.0						
17	180 40.6	30 11.9	+13 41.8		116 12.0	+21 08.6	56 43.1	+20 14.1	166 27.0	+3 28.0						
18	195 43.1	45 11.7	+13 40.8		131 12.6	+21 09.0	71 45.0	+20 14.0	181 29.4	+3 28.0						
19	210 45.6	60 11.5		39.7	146 13.2	09.3	86 46.9	13.9	196 31.7	28.0						
20	225 48.0	75 11.3		38.6	161 13.8	09.6	101 48.8	13.8	211 34.1	28.1						
21	240 50.5	90 11.1		37.6	176 14.4	10.0	116 50.7	13.7	226 36.5	28.1						
22	255 53.0	105 10.9		36.5	191 15.0	10.3	131 52.6	13.5	241 38.9	28.1						
23	270 55.4	120 10.7		35.4	206 15.6	10.6	146 54.5	13.4	256 41.3	28.1						
24	285 57.9	135 10.5	+13 34.4		221 16.3	+21 10.9	161 56.4	+20 13.3	271 43.7	+3 28.1						
Dif	—	-2	-11		+6	+3	+19	-1	+24	0						

UT	SOL			☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG:12 ^h 05.1 ^m			Edad: 22.9 ^d PHE { 4 ^h : 58'2 12 ^h : 58'5 20 ^h : 58'7 PMG: 6 ^h 09 ^m R°: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	° /	° /		° /		° /		°	h m	h m	h m	h m m	h m m		
0	178 44.5	+22 29.6		270 36.6	+10 40.3	124 149		60 N	** **	1 23	2 51	22 44 3	14 07 105		
1	193 44.4	29.4		285 08.0	+10 55.2	124 149		58	** **	2 00	3 10	22 54 8	13 58 100		
2	208 44.3	29.1		299 39.4	+11 10.1	122 148		56	** **	26	25	23 02 13	50 95		
3	223 44.2	28.8		314 10.6		122 148		54	1 16	2 46	39	10 17	44 91		
4	238 44.1	28.5		328 41.7		121 148		52	1 51	3 03	3 50	17 20	37 88		
5	253 44.0	+22 28.2		343 12.8	+11 54.5	121 148		50	2 15	3 17	4 00	23 23 23	13 32 85		
6	268 43.9	+22 27.9		357 43.7	+12 09.2	119 147		45	2 57	3 45	4 22	23 37 29	13 20 79		
7	283 43.8	27.7		12 14.6		119 147		40	3 26	4 06	39	48 34	10 74		
8	298 43.7	27.4		26 45.3		117 146		35	3 48	24	4 53	23 58 37	13 02 70		
9	313 43.7	27.1		41 16.0	+12 53.1	117 146		30	4 05	4 38	5 06	** ** *	12 55 66		
10	328 43.6	26.8		55 46.6	+13 07.6	116 145		20	33	5 02	27	** ** *	42 61		
11	343 43.5	+22 26.5		70 17.0	+13 22.1	114 145		10 N	4 55	5 22	5 45	** ** *	12 31 56		
12	358 43.4	+22 26.2		84 47.4	+13 36.6	114 145		0	5 13	5 39	6 01	** ** *	12 21 51		
13	13 43.3	25.9		99 17.7	+13 50.9	113 143		10 S	29	5 55	18	0 06 54	11 47		
14	28 43.2	25.6		113 47.8	+14 05.3	111 144		20	5 45	6 12	36	14 59	12 00 42		
15	43 43.1	25.4		128 17.9		111 142		30	6 00	30	6 56	24 65	11 48 36		
16	58 43.0	25.1		142 47.8		109 143		35	08	40	7 08	30 68	41 33		
17	73 42.9	+22 24.8		157 17.6	+14 47.9	108 141		40	6 17	6 51	7 21	0 36 73	11 33 29		
18	88 42.8	+22 24.5		171 47.4	+15 02.0	108 141		45	6 27	7 04	7 37	0 44 77	11 23 25		
19	103 42.7	24.2		186 17.0		106 141		50	38	19	7 57	53 83	12 20		
20	118 42.6	23.9		200 46.5		105 139		52	43	26	8 06	0 57 86	07 17		
21	133 42.5	23.6		215 15.9		104 140		54	48	34	16	1 02 89	11 01 14		
22	148 42.4	23.3		229 45.2	+15 57.8	103 138		56	6 54	42	28	07 93	10 55 10		
23	163 42.3	23.0		244 14.3	+16 11.6	101 138		58	7 00	7 52	42	13 97	48 6		
24	178 42.2	+22 22.7		258 43.4	+16 25.3	137		60 S	7 07	8 02	8 58	1 20 102	10 40 2		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 4 ^h 55.3 ^m		Mag: -4.1 PMG: 14 ^h 59 ^m		Mag: +1.4 PMG: 9 ^h 15 ^m		Mag: -1.8 PMG: 13 ^h 11 ^m		Mag: +0.7 PMG: 5 ^h 52 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /					
0	285 57.9	135 10.5	+13 34.4	221 16.3	+21 10.9		161 56.4	+20 13.3	271 43.7	+3 28.1					
1	301 00.3	150 10.4	33.3	236 16.9	11.3		176 58.3	13.2	286 46.1	28.2					
2	316 02.8	165 10.2	32.2	251 17.5	11.6		192 00.2	13.1	301 48.4	28.2					
3	331 05.3	180 10.0	31.2	266 18.1	11.9		207 02.1	13.0	316 50.8	28.2					
4	346 07.7	195 09.8	30.1	281 18.7	12.3		222 04.0	12.8	331 53.2	28.2					
5	1 10.2	210 09.6	+13 29.0	296 19.3	+21 12.6		237 05.9	+20 12.7	346 55.6	+3 28.2					
6	16 12.7	225 09.4	+13 27.9	311 19.9	+21 12.9		252 07.8	+20 12.6	1 58.0	+3 28.3					
7	31 15.1	240 09.2	26.9	326 20.5	13.2		267 09.7	12.5	17 00.4	28.3					
8	46 17.6	255 09.0	25.8	341 21.1	13.6		282 11.6	12.4	32 02.8	28.3					
9	61 20.1	270 08.8	24.7	356 21.7	13.9		297 13.5	12.2	47 05.2	28.3					
10	76 22.5	285 08.6	23.6	11 22.4	14.2		312 15.4	12.1	62 07.5	28.3					
11	91 25.0	300 08.5	+13 22.6	26 23.0	+21 14.5		327 17.3	+20 12.0	77 09.9	+3 28.4					
12	106 27.4	315 08.3	+13 21.5	41 23.6	+21 14.9		342 19.2	+20 11.9	92 12.3	+3 28.4					
13	121 29.9	330 08.1	20.4	56 24.2	15.2		357 21.1	11.8	107 14.7	28.4					
14	136 32.4	345 07.9	19.3	71 24.8	15.5		12 23.0	11.6	122 17.1	28.4					
15	151 34.8	0 07.7	18.3	86 25.4	15.8		27 24.9	11.5	137 19.5	28.4					
16	166 37.3	15 07.5	17.2	101 26.0	16.2		42 26.8	11.4	152 21.9	28.5					
17	181 39.8	30 07.4	+13 16.1	116 26.6	+21 16.5		57 28.7	+20 11.3	167 24.3	+3 28.5					
18	196 42.2	45 07.2	+13 15.0	131 27.2	+21 16.8		72 30.6	+20 11.2	182 26.6	+3 28.5					
19	211 44.7	60 07.0	13.9	146 27.9	17.1		87 32.5	11.1	197 29.0	28.5					
20	226 47.2	75 06.8	12.9	161 28.5	17.5		102 34.4	10.9	212 31.4	28.5					
21	241 49.6	90 06.6	11.8	176 29.1	17.8		117 36.3	10.8	227 33.8	28.5					
22	256 52.1	105 06.5	10.7	191 29.7	18.1		132 38.2	10.7	242 36.2	28.6					
23	271 54.6	120 06.3	09.6	206 30.3	18.4		147 40.1	10.6	257 38.6	28.6					
24	286 57.0	135 06.1	+13 08.5	221 30.9	+21 18.7		162 42.0	+20 10.5	272 41.0	+3 28.6					
Dif	—	-2	-11	+6	+3		+19	-1	+24	0					

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna							
	SD: 15'7 PMG:12 ^h 05.3 ^m				Edad: 23.9 ^d SD: 16'0 PMG: 7 ^h 00 ^m						PHE { 4 ^h : 59'0 12 ^h : 59'3 20 ^h : 59'5 Rº: 57 ^m											
	hG ☉		Dec		hG ☾		Dif				Dec		Dif									
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	178	42.2	+22	22.7	258	43.4	99	+16	25.3	136	60 N	21 16	22 42	** **	22 47	10	15 52	114				
1	193	42.1		22.4	273	12.3	98		38.9	136	58	20 58	22 06	** **	23 02	18	38 106					
2	208	42.0		22.1	287	41.1	97	+16	52.5	134	56	43	21 41	** **	15 23	25 101						
3	223	41.9		21.8	302	09.8	96	+17	05.9	134	54	30	22	22 49	27 27	15 96						
4	238	41.8		21.5	316	38.4	94		19.3	134	52	19	21 05	22 16	37 31	15 05 92						
5	253	41.8	+22	21.2	331	06.8	94	+17	32.7	134	50	20 09	20 52	21 53	23 46	34	14 57 89					
6	268	41.7	+22	20.9	345	35.2	94	+17	45.9	132	45	19 48	20 24	21 12	** **	**	14 39 83					
7	283	41.6		20.6	0	03.4	92	+17	59.1	132	40	31	20 03	20 44	** **	**	24 79					
8	298	41.5		20.3	14	31.4	90	+18	12.1	130	35	17	19 46	22	** **	**	12 75					
9	313	41.4		20.0	28	59.4	90		25.1	130	30	19 04	31	20 04	0 07 41	14 01 72						
10	328	41.3		19.7	43	27.2	88		38.0	129	20	18 43	19 08	19 37	22 47	13 43 67						
11	343	41.2	+22	19.4	57	54.9	87	+18	50.8	128	10 N	18 26	18 48	19 15	0 35 51	13 27 63						
12	358	41.1	+22	19.1	72	22.5	86	+19	03.5	127	0	18 09	18 31	18 57	0 47 56	13 12 59						
13	13	41.0		18.8	86	49.9	84		16.1	126	10 S	17 52	18 15	41	1 00 60	12 58 54						
14	28	40.9		18.5	101	17.2	83		28.6	125	20	35	17 59	26	13 65	42 50						
15	43	40.8		18.2	115	44.4	82		41.1	125	30	15	41	11	29 70	24 45						
16	58	40.7		17.9	130	11.5	81	+19	53.4	123	35	17 03	31	18 02	38 74	14 42						
17	73	40.6	+22	17.6	144	38.4	79	+20	05.6	122	40	16 50	17 20	17 54	1 49 77	12 02 39						
18	88	40.6	+22	17.3	159	05.2	78	+20	17.7	121	45	16 34	17 07	17 44	2 01 82	11 48 34						
19	103	40.5		16.9	173	31.8	76		29.7	120	50	15	16 52	33	16 88	32 28						
20	118	40.4		16.6	187	58.4	76		41.6	119	52	16 05	45	29	23 92	24 25						
21	133	40.3		16.3	202	24.7	73	+20	53.4	118	54	15 55	38	23	31 95	15 22						
22	148	40.2		16.0	216	51.0	73	+21	05.0	116	56	44	30	18	40 99	11 05 18						
23	163	40.1		15.7	231	17.1	71		16.6	116	58	30	20	12	2 50 105	10 54 13						
24	178	40.0	+22	15.4	245	43.1	70	+21	28.0	114	60 S	15 14	16 09	17 05	3 02 112	10 42 5						
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO													
	PMG 4 ^h 51.4 ^m		Mag: -4.1 PMG: 15 ^h 00 ^m		Mag: +1.4 PMG: 9 ^h 14 ^m		Mag: -1.8 PMG: 13 ^h 08 ^m		Mag: +0.7 PMG: 5 ^h 48 ^m													
h	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄													
	° /		° /		° /		° /		° /													
0	286	57.0	135	06.1	+13	08.5	221	30.9	+21	18.7	162	42.0	+20	10.5	272	41.0	+3	28.6				
1	301	59.5	150	05.9		07.5	236	31.5		19.1	177	43.9		10.3	287	43.4		28.6				
2	317	01.9	165	05.7		06.4	251	32.1		19.4	192	45.8		10.2	302	45.8		28.6				
3	332	04.4	180	05.6		05.3	266	32.7		19.7	207	47.7		10.1	317	48.2		28.7				
4	347	06.9	195	05.4		04.2	281	33.3		20.0	222	49.6		10.0	332	50.5		28.7				
5	2	09.3	210	05.2	+13	03.1	296	33.9	+21	20.3	237	51.5	+20	09.9	347	52.9	+3	28.7				
6	17	11.8	225	05.0	+13	02.0	311	34.6	+21	20.7	252	53.4	+20	09.7	2	55.3	+3	28.7				
7	32	14.3	240	04.9	+13	00.9	326	35.2		21.0	267	55.3		09.6	17	57.7		28.7				
8	47	16.7	255	04.7	+12	59.9	341	35.8		21.3	282	57.2		09.5	33	00.1		28.7				
9	62	19.2	270	04.5		58.8	356	36.4		21.6	297	59.1		09.4	48	02.5		28.8				
10	77	21.7	285	04.4		57.7	11	37.0		21.9	313	01.0		09.3	63	04.9		28.8				
11	92	24.1	300	04.2	+12	56.6	26	37.6	+21	22.3	328	02.9	+20	09.1	78	07.3	+3	28.8				
12	107	26.6	315	04.0	+12	55.5	41	38.2	+21	22.6	343	04.8	+20	09.0	93	09.7	+3	28.8				
13	122	29.1	330	03.8		54.4	56	38.8		22.9	358	06.7		08.9	108	12.1		28.8				
14	137	31.5	345	03.7		53.3	71	39.4		23.2	13	08.6		08.8	123	14.5		28.9				
15	152	34.0	0	03.5		52.3	86	40.0		23.5	28	10.5		08.7	138	16.9		28.9				
16	167	36.4	15	03.3		51.2	101	40.7		23.8	43	12.4		08.5	153	19.2		28.9				
17	182	38.9	30	03.2	+12	50.1	116	41.3	+21	24.1	58	14.3	+20	08.4	168	21.6	+3	28.9				
18	197	41.4	45	03.0	+12	49.0	131	41.9	+21	24.5	73	16.2	+20	08.3	183	24.0	+3	28.9				
19	212	43.8	60	02.8		47.9	146	42.5		24.8	88	18.1		08.2	198	26.4		28.9				
20	227	46.3	75	02.7		46.8	161	43.1		25.1	103	20.0		08.1	213	28.8		29.0				
21	242	48.8	90	02.5		45.7	176	43.7		25.4	118	21.9		07.9	228	31.2		29.0				
22	257	51.2	105	02.4		44.6	191	44.3		25.7	133	23.7		07.8	243	33.6		29.0				
23	272	53.7	120	02.2		43.5	206	44.9		26.0	148	25.6		07.7	258	36.0		29.0				
24	287	56.2	135	02.0	+12	42.4	221	45.5	+21	26.3	163	27.5	+20	07.6	273	38.4	+3	29.0				
Dif	—		-2		-11		+6		+3		+19		-1		+24							

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 05.4 ^m				Edad: 24.9 ^d SD: 16'2 PMG: 7 ^h 55 ^m													
	PHE { 4 ^h : 59'8 12 ^h : 60'0 20 ^h : 60'2 Rº: 62 ^m																	
	hG ☉	Dec			hG ☾	Dif			Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	178	40.0	+22	15.4	245	43.1	+21	28.0	113	60 N	** **	1 29	2 55	22 55	23	17 45	110	
1	193	39.9		15.1	260	09.0		39.3	112	58	** **	2 05	3 13	23 18	33	22 101		
2	208	39.8		14.8	274	34.7	+21	50.5	111	56	** **	30	28	37 38		17 04	95	
3	223	39.7		14.4	289	00.3	+22	01.6	109	54	1 22	2 49	41	23 53	42	16 49	91	
4	238	39.7		14.1	303	25.7		12.5	108	52	1 55	3 05	3 52	** **	**	36	87	
5	253	39.6	+22	13.8	317	51.0	+22	23.3	107	50	2 18	3 19	4 02	** **	**	16 24	85	
6	268	39.5	+22	13.5	332	16.2	+22	34.0	105	45	2 59	3 47	4 23	0 06	37	16 00	81	
7	283	39.4		13.2	346	41.2		44.5	104	40	3 27	4 08	40	22	42	15 41	77	
8	298	39.3		12.9	1	06.1	+22	54.9	103	35	3 49	25	4 54	35	45	25	75	
9	313	39.2		12.5	15	30.9	+23	05.2	101	30	4 07	4 39	5 06	0 47	48	15 12	72	
10	328	39.1		12.2	29	55.5		15.3	100	20	34	5 03	27	1 07	53	14 48	69	
11	343	39.0	+22	11.9	44	20.1	+23	25.3	99	10 N	4 55	5 22	5 45	1 25	56	14 28	66	
12	358	38.9	+22	11.6	58	44.4	+23	35.2	97	0	5 13	5 39	6 02	1 42	60	14 09	63	
13	13	38.9		11.3	73	08.7		44.9	95	10 S	29	5 56	18	1 59	63	13 51	60	
14	28	38.8		10.9	87	32.8	+23	54.4	94	20	5 45	6 12	36	2 17	67	31	56	
15	43	38.7		10.6	101	56.7	+24	03.8	94	30	6 00	30	6 56	38	72	13 08	53	
16	58	38.6		10.3	116	20.6		13.1	93	35	08	39	7 07	2 50	75	12 55	50	
17	73	38.5	+22	10.0	130	44.3	+24	22.2	91	40	6 17	6 50	7 21	3 05	77	12 39	48	
18	88	38.4	+22	09.6	145	07.9	+24	31.1	89	45	6 26	7 03	7 36	3 22	82	12 21	44	
19	103	38.3		09.3	159	31.3		39.9	88	50	37	18	7 56	43	88	11 58	39	
20	118	38.2		09.0	173	54.7		48.5	86	52	42	25	8 05	3 53	91	47	36	
21	133	38.2		08.7	188	17.9	+24	57.0	85	54	47	32	15	4 05	94	35	33	
22	148	38.1		08.3	202	40.9	+25	05.3	83	56	52	41	26	18	99	21	28	
23	163	38.0		08.0	217	03.9		13.4	81	58	6 59	7 50	40	33	106	11 05	22	
24	178	37.9	+22	07.7	231	26.7	+25	21.4	80	60 S	7 05	8 01	8 55	4 52	116	10 46	12	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 47.5 ^m		Mag: -4.1 PMG: 15 ^h 00 ^m		Mag: +1.4 PMG: 9 ^h 13 ^m		Mag: -1.8 PMG: 13 ^h 05 ^m		Mag: +0.7 PMG: 5 ^h 45 ^m	
	hG ♊	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	287	56.2	135	02.0	+12	42.4	221	45.5	+21	26.3
1	302	58.6	150	01.9		41.3	236	46.1		26.7
2	318	01.1	165	01.7		40.2	251	46.8		27.0
3	333	03.5	180	01.6		39.1	266	47.4		27.3
4	348	06.0	195	01.4		38.0	281	48.0		27.6
5	3	08.5	210	01.2	+12	37.0	296	48.6	+21	27.9
6	18	10.9	225	01.1	+12	35.9	311	49.2	+21	28.2
7	33	13.4	240	00.9		34.8	326	49.8		28.5
8	48	15.9	255	00.8		33.7	341	50.4		28.8
9	63	18.3	270	00.6		32.6	356	51.0		29.1
10	78	20.8	285	00.5		31.5	11	51.6		29.4
11	93	23.3	300	00.3	+12	30.4	26	52.2	+21	29.8
12	108	25.7	315	00.1	+12	29.3	41	52.8	+21	30.1
13	123	28.2	330	00.0		28.2	56	53.5		30.4
14	138	30.7	344	59.8		27.1	71	54.1		30.7
15	153	33.1	359	59.7		26.0	86	54.7		31.0
16	168	35.6	14	59.5		24.9	101	55.3		31.3
17	183	38.0	29	59.4	+12	23.8	116	55.9	+21	31.6
18	198	40.5	44	59.2	+12	22.7	131	56.5	+21	31.9
19	213	43.0	59	59.1		21.6	146	57.1		32.2
20	228	45.4	74	58.9		20.5	161	57.7		32.5
21	243	47.9	89	58.8		19.4	176	58.3		32.8
22	258	50.4	104	58.6		18.3	191	58.9		33.1
23	273	52.8	119	58.5		17.2	206	59.6		33.4
24	288	55.3	134	58.4	+12	16.0	222	00.2	+21	33.7
Dif	—		-2		-11		+6		+3	

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna											
	SD: 15'7 PMG:12 ^h 05.5 ^m			Edad: 25.9 ^d SD: 16'4 PMG: 8 ^h 57 ^m PHE { 4 ^h : 60'4 12 ^h : 60'6 20 ^h : 60'7 Rº: 67 ^m								Civil			Náutico			Hora Rº			Hora Rº								
	hG ☉	Dec		hG ☾	Dif		Dec		Dif			Civil			Náutico			Hora Rº			Hora Rº								
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m
0	178	37.9	+22	07.7	231	26.7	+25	21.4	78	60 N	21	14	22	36	**	**	23	18	62	19	35	82							
1	193	37.8		07.4	245	49.4		29.2	76	58	20	56	22	03	**	**	23	51	64	19	03	79							
2	208	37.7		07.0	260	12.0		36.8	74	56	41	21	38	**	**	**	**	**	**	18	39	77							
3	223	37.6		06.7	274	34.5		44.2	73	54	28	19	22	44	**	**	**	**	**	20	76								
4	238	37.6		06.4	288	56.8		51.5	71	52	17	21	03	22	13	0	06	47	18	03	76								
5	253	37.5	+22	06.0	303	19.0	+25	58.6	69	50	20	07	20	50	21	50	0	18	49	17	49	75							
6	268	37.4	+22	05.7	317	41.2	+26	05.5	67	45	19	47	20	23	21	10	0	43	53	17	21	73							
7	283	37.3		05.4	332	03.2		12.2	67	40	30	20	02	20	42	1	04	55	16	58	73								
8	298	37.2		05.0	346	25.1		18.7	65	35	16	19	45	21		20	58		40	71									
9	313	37.1		04.7	0	46.9		25.1	64	30	19	04	31	20	04	1	35	59	16	24	71								
10	328	37.1		04.4	15	08.6		31.3	62	20	18	43	19	08	19	36	2	00	62	15	57	70							
11	343	37.0	+22	04.0	29	30.1	+26	37.2	59	10 N	18	26	18	48	19	15	2	21	65	15	34	68							
12	358	36.9	+22	03.7	43	51.6	+26	43.0	58	0	18	09	18	31	18	57	2	42	66	15	12	68							
13	13	36.8		03.3	58	13.0		48.6	56	10 S	17	53	18	15	42		3	02	68	14	51	66							
14	28	36.7		03.0	72	34.3		54.0	54	20	36	17	59	27		24	70		27	66									
15	43	36.6		02.7	86	55.5	+26	59.2	52	30	16	42	11	3	50	73	14	01	64										
16	58	36.6		02.3	101	16.6	+27	04.2	50	35	17	04	32	18	03	4	05	74	13	45	63								
17	73	36.5	+22	02.0	115	37.6	+27	09.1	49	40	16	51	17	21	17	55	4	22	77	13	27	61							
18	88	36.4	+22	01.7	129	58.5	+27	13.7	46	45	16	36	17	09	17	46	4	44	78	13	05	60							
19	103	36.3		01.3	144	19.3		18.1	44	50	17	16	54	35		5	11	82	12	37	57								
20	118	36.2		01.0	158	40.1		22.3	42	52	16	08	47	30		24	84		23	56									
21	133	36.1		00.6	173	00.8		26.3	40	54	15	57	40	25		39	86		12	08	53								
22	148	36.1	+22	00.3	187	21.4		30.1	38	56	46	32	20		5	57	89		11	49	51								
23	163	36.0	+21	59.9	201	41.9		33.6	35	58	33	22	14		6	19	94		11	27	46								
24	178	35.9	+21	59.6	216	02.4	+27	37.0	34	60 S	15	17	16	12	17	07	6	48	103	10	58	37							

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 43.5 ^m		Mag: -4.1 PMG: 15 ^h 00 ^m		Mag: +1.4 PMG: 9 ^h 12 ^m		Mag: -1.8 PMG: 13 ^h 01 ^m		Mag: +0.7 PMG: 5 ^h 41 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	288	55.3	134	58.4	+12	16.0	222	00.2	+21	33.7
1	303	57.8	149	58.2		14.9	237	00.8		34.0
2	319	00.2	164	58.1		13.8	252	01.4		34.3
3	334	02.7	179	57.9		12.7	267	02.0		34.6
4	349	05.2	194	57.8		11.6	282	02.6		34.9
5	4	07.6	209	57.6	+12	10.5	297	03.2	+21	35.2
6	19	10.1	224	57.5	+12	09.4	312	03.8	+21	35.5
7	34	12.5	239	57.4		08.3	327	04.4		35.9
8	49	15.0	254	57.2		07.2	342	05.0		36.2
9	64	17.5	269	57.1		06.1	357	05.6		36.5
10	79	19.9	284	56.9		05.0	12	06.3		36.8
11	94	22.4	299	56.8	+12	03.9	27	06.9	+21	37.1
12	109	24.9	314	56.7	+12	02.8	42	07.5	+21	37.4
13	124	27.3	329	56.5		01.7	57	08.1		37.7
14	139	29.8	344	56.4	+12	00.5	72	08.7		38.0
15	154	32.3	359	56.2	+11	59.4	87	09.3		38.2
16	169	34.7	14	56.1		58.3	102	09.9		38.5
17	184	37.2	29	56.0	+11	57.2	117	10.5	+21	38.8
18	199	39.7	44	55.8	+11	56.1	132	11.1	+21	39.1
19	214	42.1	59	55.7		55.0	147	11.7		39.4
20	229	44.6	74	55.6		53.9	162	12.3		39.7
21	244	47.0	89	55.4		52.8	177	13.0		40.0
22	259	49.5	104	55.3		51.6	192	13.6		40.3
23	274	52.0	119	55.2		50.5	207	14.2		40.6
24	289	54.4	134	55.1	+11	49.4	222	14.8	+21	40.9
Dif	—		-1	-11		+6	+3	+19		-1
										+24

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG:12 ^h 05.7 ^m			Edad: 26.9 ^d SD: 16'6 PMG: 10 ^h 03 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	35.9	+21	59.6	216	02.4	+27	37.0	60 N	1 35	2 58	** ** *	20 55	36		
1	193	35.8		59.3	230	22.8		40.2	58	2 09	3 16	** ** *	20 20	44		
2	208	35.7		58.9	244	43.1		43.1	56	33	31	0 15	65	19	55	48
3	223	35.7		58.6	259	03.4		45.9	54	1 27	2 52	43	35	65	34	5
4	238	35.6		58.2	273	23.6		48.4	52	1 59	3 08	3 54	0 51	66	17	53
5	253	35.5	+21	57.9	287	43.8	+27	50.7	50	2 21	3 22	4 04	1 06	66	19	02 55
6	268	35.4	+21	57.5	302	03.9	+27	52.8	45	3 01	3 49	4 25	1 35	66	18	33 57
7	283	35.3		57.2	316	23.9		54.7	40	29	4 09	4 41	1 57	67	17	09 60
8	298	35.3		56.8	330	44.0		56.4	35	3 50	26	4 55	2 16	68	17	50 61
9	313	35.2		56.5	345	03.9		57.9	30	4 08	4 40	5 07	2 33	67	33	63
10	328	35.1		56.1	359	23.9	+27	59.1	20	35	5 04	28	3 00	68	17	05 64
11	343	35.0	+21	55.8	13	43.8	+28	00.1	10 N	4 56	5 23	5 46	3 24	68	16	41 66
12	358	34.9	+21	55.4	28	03.7	+28	00.9	0	5 14	5 40	6 02	3 47	67	16	19 66
13	13	34.9		55.1	42	23.6		01.5	10 S	30	5 56	18	4 09	67	15	56 68
14	28	34.8		54.7	56	43.4		01.9	20	5 45	6 12	36	4 33	67	32	69
15	43	34.7		54.4	71	03.2		02.0	30	6 00	29	6 55	5 01	67	15	03 71
16	58	34.6		54.0	85	23.0		02.0	35	08	39	7 07	18	66	14	47 71
17	73	34.5	+21	53.6	99	42.8	+28	01.7	40	6 16	6 50	7 20	5 37	66	14	27 72
18	88	34.5	+21	53.3	114	02.6	+28	01.2	45	6 25	7 02	7 35	6 01	65	14	03 74
19	103	34.4		52.9	128	22.4	+28	00.4	50	36	17	7 54	31	64	13	33 75
20	118	34.3		52.6	142	42.1	+27	59.5	52	41	23	8 03	6 46	64	18	76
21	133	34.2		52.2	157	01.9		58.3	54	46	31	13	7 04	63	13	00 77
22	148	34.2		51.9	171	21.7		56.9	56	51	39	24	25	62	12	39 79
23	163	34.1		51.5	185	41.5		55.3	58	6 57	48	38	7 52	59	12	12 81
24	178	34.0	+21	51.1	200	01.3	+27	53.4	60 S	7 04	7 58	8 53	8 30	55	11	34 86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 39.6 ^m		Mag: -4.1 PMG: 15 ^h 00 ^m		Mag: +1.4 PMG: 9 ^h 11 ^m		Mag: -1.8 PMG: 12 ^h 58 ^m		Mag: +0.7 PMG: 5 ^h 37 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	289	54.4	134	55.1	+11	49.4	222	14.8	+21	40.9
1	304	56.9	149	54.9		48.3	237	15.4		41.2
2	319	59.4	164	54.8		47.2	252	16.0		41.5
3	335	01.8	179	54.7		46.1	267	16.6		41.8
4	350	04.3	194	54.5		44.9	282	17.2		42.1
5	5	06.8	209	54.4	+11	43.8	297	17.8	+21	42.4
6	20	09.2	224	54.3	+11	42.7	312	18.4	+21	42.7
7	35	11.7	239	54.2		41.6	327	19.1		43.0
8	50	14.2	254	54.0		40.5	342	19.7		43.3
9	65	16.6	269	53.9		39.4	357	20.3		43.6
10	80	19.1	284	53.8		38.2	12	20.9		43.9
11	95	21.5	299	53.7	+11	37.1	27	21.5	+21	44.1
12	110	24.0	314	53.5	+11	36.0	42	22.1	+21	44.4
13	125	26.5	329	53.4		34.9	57	22.7		44.7
14	140	28.9	344	53.3		33.8	72	23.3		45.0
15	155	31.4	359	53.2		32.6	87	23.9		45.3
16	170	33.9	14	53.1		31.5	102	24.5		45.6
17	185	36.3	29	52.9	+11	30.4	117	25.1	+21	45.9
18	200	38.8	44	52.8	+11	29.3	132	25.8	+21	46.2
19	215	41.3	59	52.7		28.1	147	26.4		46.5
20	230	43.7	74	52.6		27.0	162	27.0		46.7
21	245	46.2	89	52.5		25.9	177	27.6		47.0
22	260	48.7	104	52.4		24.8	192	28.2		47.3
23	275	51.1	119	52.2		23.7	207	28.8		47.6
24	290	53.6	134	52.1	+11	22.5	222	29.4	+21	47.9
Dif	—		-1	-11		+6	+3	+19	-1	+24

UT	SOL			● LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna								
	SD: 15'7 PMG:12 ^h 05.8 ^m			Edad: 27.9 ^d SD: 16'6 PMG: 11 ^h 10 ^m PHE { 4 ^h : 61'1 12 ^h : 61'1 20 ^h : 61'0 R°: 66 ^m																						
	hG ☉	Dec		hG ☾	Dif		Dec	Dif				Civil	Náutico	Hora	R°	Hora	R°									
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m					
0	178	34.0	+21	51.1	200	01.3	9	+27	53.4	20	60 N	21	11	22	31	**	**	0	19	106	21	31	14			
1	193	33.9		50.8	214	21.2			51.4	23	58	20	53	21	59	**	**	0	54	97	21	04	23			
2	208	33.9		50.4	228	41.0	8		49.1	25	56		39	35	23	34		1	20	92	20	43	29			
3	223	33.8		50.0	243	00.9	9		46.6	27	54		26	17	22	39		40	89		25	34				
4	238	33.7		49.7	257	20.8	9		43.9	29	52		15	21	01	22	09	1	57	86	20	10	37			
5	253	33.6	+21	49.3	271	40.8	10	+27	41.0	31	50	20	06	20	48	21	47	2	12	84	19	57	40			
6	268	33.6	+21	49.0	286	00.7	9	+27	37.9	34	45	19	45	20	21	21	08	2	41	81	19	30	46			
7	283	33.5		48.6	300	20.8	11		34.5	36	40	29	20	20	01	20	41	3	04	78	19	09	49			
8	298	33.4		48.2	314	40.8	10		30.9	38	35		15	19	44		20		24	76	18	51	52			
9	313	33.3		47.9	329	00.9	11		27.1	40	30	19	03	30	20	03		3	40	74		36	54			
10	328	33.3		47.5	343	21.1	12		23.1	42	20	18	43	19	07	19	36	4	08	71	18	09	59			
11	343	33.2	+21	47.1	357	41.3	12	+27	18.9	44	10 N	18	26	18	48	19	15	4	32	69	17	47	62			
12	358	33.1	+21	46.8	12	01.5	12	+27	14.5	46	0	18	09	18	32	18	58	4	54	67	17	25	66			
13	13	33.0		46.4	26	21.9	14		09.9	49	10 S	17	53		16		42	5	16	65	17	04	68			
14	28	33.0		46.0	40	42.2	13	+27	05.0	50	20		36	18	00		27	5	40	62	16	41	72			
15	43	32.9		45.7	55	02.7	15	+27	00.0	53	30		17	17	43		12	6	08	59	16	14	76			
16	58	32.8		45.3	69	23.2	15	+26	54.7	55	35	17	05		33	18	04		24	57	15	58	78			
17	73	32.7	+21	44.9	83	43.8	16	+26	49.2	57	40	16	53	17	23	17	56	6	43	55	15	39	81			
18	88	32.7	+21	44.5	98	04.5	17	+26	43.5	58	45	16	37	17	10	17	47	7	06	52	15	17	84			
19	103	32.6		44.2	112	25.2	17		37.7	61	50		19	16	56		37		35	48	14	48	90			
20	118	32.5		43.8	126	46.0	18		31.6	63	52		10		49		32	7	50	45		34	92			
21	133	32.4		43.4	141	06.9	19		25.3	65	54	16	00		42		27	8	07	41	14	17	96			
22	148	32.4		43.0	155	27.9	20		18.8	66	56		15	49		34		22		27	37	13	58	100		
23	163	32.3		42.7	169	49.0	21		12.2	66	58			36		25		16		8	51	31		33	107	
24	178	32.2	+21	42.3	184	10.1	21	+26	05.3	69	60 S	15	21		16	15	17	10		9	25	20		13	00	118
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO													
	PMG 4 ^h 35.7 ^m			Mag: -4.1 PMG: 15 ^h 01 ^m			Mag: +1.4 PMG: 9 ^h 10 ^m			Mag: -1.8 PMG: 12 ^h 55 ^m			Mag: +0.7 PMG: 5 ^h 33 ^m													
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	290	53.6	134	52.1	+11	22.5	222	29.4	+21	47.9	165	44.1	+19	58.8	276	31.2	+3	30.1								
1	305	56.0	149	52.0		21.4	237	30.0		48.2	180	46.0		58.7	291	33.6		30.1								
2	320	58.5	164	51.9		20.3	252	30.6		48.5	195	47.9		58.6	306	36.0		30.1								
3	336	01.0	179	51.8		19.2	267	31.2		48.8	210	49.8		58.5	321	38.4		30.1								
4	351	03.4	194	51.7		18.0	282	31.8		49.0	225	51.7		58.4	336	40.8		30.1								
5	6	05.9	209	51.6	+11	16.9	297	32.5	+21	49.3	240	53.6	+19	58.2	351	43.2	+3	30.1								
6	21	08.4	224	51.5	+11	15.8	312	33.1	+21	49.6	255	55.5	+19	58.1	6	45.6	+3	30.1								
7	36	10.8	239	51.3		14.6	327	33.7		49.9	270	57.4		58.0	21	48.0		30.1								
8	51	13.3	254	51.2		13.5	342	34.3		50.2	285	59.3		57.9	36	50.4		30.2								
9	66	15.8	269	51.1		12.4	357	34.9		50.5	301	01.1		57.7	51	52.8		30.2								
10	81	18.2	284	51.0		11.3	12	35.5		50.7	316	03.0		57.6	66	55.2		30.2								
11	96	20.7	299	50.9	+11	10.1	27	36.1	+21	51.0	331	04.9	+19	57.5	81	57.6	+3	30.2								
12	111	23.2	314	50.8	+11	09.0	42	36.7	+21	51.3	346	06.8	+19	57.4	97	00.0	+3	30.2								
13	126	25.6	329	50.7		07.9	57	37.3		51.6	1	08.7		57.2	112	02.4		30.2								
14	141	28.1	344	50.6		06.7	72	37.9		51.9	16	10.6		57.1	127	04.9		30.2								
15	156	30.5	359	50.5		05.6	87	38.5		52.2	31	12.5		57.0	142	07.3		30.2								
16	171	33.0	14	50.4		04.5	102	39.2		52.4	46	14.4		56.9	157	09.7		30.2								
17	186	35.5	29	50.3	+11	03.3	117	39.8	+21	52.7	61	16.3	+19	56.8	172	12.1	+3	30.3								
18	201	37.9	44	50.2	+11	02.2	132	40.4	+21	53.0	76	18.2	+19	56.6	187	14.5	+3	30.3								
19	216	40.4	59	50.1	+11	01.1	147	41.0		53.3	91	20.1		56.5	202	16.9		30.3								
20	231	42.9	74	50.0	+10	59.9	162	41.6		53.6	106	22.0		56.4	217	19.3		30.3								
21	246	45.3	89	49.9		58.8	177	42.2		53.8	121	23.9		56.3	232	21.7		30.3								
22	261	47.8	104	49.8		57.7	192	42.8		54.1	136	25.8		56.1	247	24.1		30.3								
23	276	50.3	119	49.7		56.5	207	43.4		54.4	151	27.7		56.0	262	26.5		30.3								
24	291	52.7	134	49.6	+10	55.4	222	44.0	+21	54.7	166	29.6	+19	55.9	277	28.9	+3	30.3								
Dif	—			-1			-11	+6			+3	+19			-1	+24			0							

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG:12 ^h 05.9 ^m			Edad: 28.9 ^d SD: 16'6 PMG: 12 ^h 14 ^m						PHE { 4 ^h : 61'0 12 ^h : 60'9 20 ^h : 60'7 Rº: 60 ^m			Hora Rº		Hora Rº			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil							
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	32.2	+21	42.3	184	10.1	+26	05.3	71	60 N	**	**	1	42	3	02	2	03
1	193	32.2		41.9	198	31.4	+25	58.2	72	58	**	**	2	14	19	29	109	25
2	208	32.1		41.5	212	52.7		51.0	75	56			0	38	37	2	50	102
3	223	32.0		41.2	227	14.2		43.5	75	54	1	33	2	55	46	3	07	97
4	238	31.9		40.8	241	35.7		35.9	76	52	2	03	3	11	3	57	22	93
5	253	31.9	+21	40.4	255	57.4	+25	28.1	78	50	2	25	3	24	4	06	3	34
6	268	31.8	+21	40.0	270	19.2	+25	20.1	80	45	3	04	3	51	4	27	4	00
7	283	31.7		39.6	284	41.0		11.9	82	40	31	4	11	43	21	80	19	57
8	298	31.7		39.3	299	03.0	+25	03.5	84	35	3	52	28	4	57	38	77	42
9	313	31.6		38.9	313	25.1	+24	55.0	85	30	4	09	4	42	5	09	4	53
10	328	31.5		38.5	327	47.3		46.2	88	20	36	5	05	29	5	18	69	19
11	343	31.5	+21	38.1	342	09.6	+24	37.3	89	10 N	4	57	5	23	5	46	5	39
12	358	31.4	+21	37.7	356	32.0	+24	28.3	90	0	5	14	5	40	6	02	5	59
13	13	31.3		37.4	10	54.5		19.0	93	10 S	30	5	56	18	6	19	58	18
14	28	31.3		37.0	25	17.2	+24	09.6	94	20	44	6	12	35	6	41	53	17
15	43	31.2		36.6	39	40.0	+24	00.0	96	30	5	59	29	6	55	7	05	49
16	58	31.1		36.2	54	02.9	+23	50.3	97	35	6	07	38	7	06	20	45	17
17	73	31.0	+21	35.8	68	25.9	+23	40.3	100	40	6	15	6	49	7	19	7	37
18	88	31.0	+21	35.4	82	49.0	+23	30.3	100	45	6	24	7	01	7	34	7	56
19	103	30.9		35.0	97	12.3		20.0	103	50	35	15	7	53	8	21	32	16
20	118	30.8		34.6	111	35.7	+23	09.7	103	52	39	22	8	01	33	29	16	05
21	133	30.8		34.3	125	59.2	+22	59.1	106	54	44	29	11	8	47	24	15	52
22	148	30.7		33.9	140	22.8		48.4	107	56	49	37	22	9	02	21	37	103
23	163	30.6		33.5	154	46.6		37.6	108	58	6	55	46	35	21	14	15	19
24	178	30.6	+21	33.1	169	10.5	+22	26.6	110	60 S	7	02	7	56	8	50	9	44

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 31.7 ^m		Mag: -4.2 PMG: 15 ^h 01 ^m		Mag: +1.4 PMG: 9 ^h 09 ^m		Mag: -1.8 PMG: 12 ^h 52 ^m		Mag: +0.7 PMG: 5 ^h 29 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	291	52.7	134	49.6	+10	55.4	222	44.0	+21	54.7
1	306	55.2	149	49.5		54.3	237	44.6		54.9
2	321	57.7	164	49.4		53.1	252	45.3		55.2
3	337	00.1	179	49.3		52.0	267	45.9		55.5
4	352	02.6	194	49.2		50.9	282	46.5		55.8
5	7	05.0	209	49.1	+10	49.7	297	47.1	+21	56.1
6	22	07.5	224	49.0	+10	48.6	312	47.7	+21	56.3
7	37	10.0	239	48.9		47.5	327	48.3		56.6
8	52	12.4	254	48.8		46.3	342	48.9		56.9
9	67	14.9	269	48.7		45.2	357	49.5		57.2
10	82	17.4	284	48.6		44.0	12	50.1		57.4
11	97	19.8	299	48.5	+10	42.9	27	50.7	+21	57.7
12	112	22.3	314	48.4	+10	41.8	42	51.3	+21	58.0
13	127	24.8	329	48.4		40.6	57	52.0		58.3
14	142	27.2	344	48.3		39.5	72	52.6		58.5
15	157	29.7	359	48.2		38.4	87	53.2		58.8
16	172	32.2	14	48.1		37.2	102	53.8		59.1
17	187	34.6	29	48.0	+10	36.1	117	54.4	+21	59.3
18	202	37.1	44	47.9	+10	34.9	132	55.0	+21	59.6
19	217	39.5	59	47.8		33.8	147	55.6	+21	59.9
20	232	42.0	74	47.7		32.6	162	56.2	+22	00.2
21	247	44.5	89	47.7		31.5	177	56.8		00.4
22	262	46.9	104	47.6		30.4	192	57.4		00.7
23	277	49.4	119	47.5		29.2	207	58.1		01.0
24	292	51.9	134	47.4	+10	28.1	222	58.7	+22	01.2
Dif	—		-1		-11		+6		+3	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'7 PMG:12 ^h 06.0 ^m				Edad: 29.9 ^d SD: 16'5 PMG: 13 ^h 14 ^m PHE { 4 ^h : 60'6 12 ^h : 60'4 20 ^h : 60'1 Rº: 56 ^m														
	hG ☉	Dec			hG ☾	Dif								Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	178	30.6	+21	33.1	169	10.5	50	+22	26.6	60 N	21 07	22 24	** **	4 01	114		21 48	3	
1	193	30.5		32.7	183	34.5	52		15.5	58	20 50	21 54	** **		18 107		37	8	
2	208	30.4		32.3	197	58.7	53	+22	04.2	56	36	32	23 20		32 102		27	12	
3	223	30.4		31.9	212	23.0	54	+21	52.8	54	24	21 14	22 33		44 98		18	15	
4	238	30.3		31.5	226	47.4	54		41.2	52	13	20 59	22 05		4 55 95		10	18	
5	253	30.3	+21	31.1	241	11.9	55	+21	29.5	50	20 04	20 46	21 44		5 05 91		21 02	22	
6	268	30.2	+21	30.7	255	36.6	57	+21	17.7	45	19 44	20 20	21 06		5 25 85		20 47	27	
7	283	30.1		30.3	270	01.4	58	+21	05.8	40	28	20 00	20 39		41 80		34	31	
8	298	30.1		29.9	284	26.4	60	+20	53.7	35	14	19 43	19		5 55 76		23	35	
9	313	30.0		29.5	298	51.5	61		41.5	30	19 03	30	20 02		6 07 72		20 13	39	
10	328	29.9		29.1	313	16.7	62		29.2	20	18 43	19 07	19 35		27 66		19 56	45	
11	343	29.9	+21	28.7	327	42.0	63	+20	16.7	10 N	18 26	18 48	19 15		6 44 62		19 42	49	
12	358	29.8	+21	28.3	342	07.5	65	+20	04.1	0	18 10	18 32	18 58		7 01 57		19 28	54	
13	13	29.7		27.9	356	33.1	66	+19	51.4	10 S	17 54	16	42		17 52		19 14	59	
14	28	29.7		27.5	10	58.8	67		38.6	20	37	18 01	28		34 48		18 59	64	
15	43	29.6		27.1	25	24.7	69		25.7	30	18	17 44	13		7 54 42		41	70	
16	58	29.5		26.7	39	50.7	70	+19	12.7	35	17 07	34	18 06		8 05 39		31	74	
17	73	29.5	+21	26.3	54	16.8	71	+18	59.6	40	16 54	17 24	17 57		8 18 35		18 19	78	
18	88	29.4	+21	25.9	68	43.1	73	+18	46.3	45	16 39	17 12	17 48		8 34 30		18 05	83	
19	103	29.4		25.5	83	09.5	74		33.0	50	21	16 58	38		8 53 24		17 48	89	
20	118	29.3		25.1	97	36.0	75		19.5	52	12	51	34		9 02 20		39	93	
21	133	29.2		24.7	112	02.7	77	+18	06.0	54	16 02	44	29		11 18		30	96	
22	148	29.2		24.3	126	29.4	77	+17	52.4	56	15 51	36	24		23 13		20	100	
23	163	29.1		23.9	140	56.3	79		38.6	58	39	28	18		35 9		17 08	105	
24	178	29.1	+21	23.5	155	23.4	81	+17	24.8	60 S	15 24	16 18	17 12		9 50 4		16 54	111	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG 4 ^h 27.8 ^m		Mag: -4.2 PMG: 15 ^h 01 ^m		Mag: +1.4 PMG: 9 ^h 08 ^m		Mag: -1.8 PMG: 12 ^h 49 ^m		Mag: +0.7 PMG: 5 ^h 25 ^m										
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	292	51.9	134	47.4	+10	28.1	222	58.7	+22	01.2	167	15.1	+19	52.9	278	26.8	+3	30.6	
1	307	54.3	149	47.3		26.9	237	59.3		01.5	182	17.0		52.8	293	29.2		30.6	
2	322	56.8	164	47.2		25.8	252	59.9		01.8	197	18.8		52.7	308	31.6		30.6	
3	337	59.3	179	47.2		24.6	268	00.5		02.0	212	20.7		52.5	323	34.0		30.6	
4	353	01.7	194	47.1		23.5	283	01.1		02.3	227	22.6		52.4	338	36.5		30.6	
5	8	04.2	209	47.0	+10	22.4	298	01.7	+22	02.6	242	24.5	+19	52.3	353	38.9	+3	30.6	
6	23	06.6	224	46.9	+10	21.2	313	02.3	+22	02.8	257	26.4	+19	52.2	8	41.3	+3	30.6	
7	38	09.1	239	46.8		20.1	328	02.9		03.1	272	28.3		52.0	23	43.7		30.6	
8	53	11.6	254	46.8		18.9	343	03.5		03.4	287	30.2		51.9	38	46.1		30.6	
9	68	14.0	269	46.7		17.8	358	04.2		03.6	302	32.1		51.8	53	48.5		30.6	
10	83	16.5	284	46.6		16.6	13	04.8		03.9	317	34.0		51.7	68	50.9		30.6	
11	98	19.0	299	46.5	+10	15.5	28	05.4	+22	04.2	332	35.9	+19	51.5	83	53.4	+3	30.6	
12	113	21.4	314	46.5	+10	14.3	43	06.0	+22	04.4	347	37.8	+19	51.4	98	55.8	+3	30.7	
13	128	23.9	329	46.4		13.2	58	06.6		04.7	2	39.7		51.3	113	58.2		30.7	
14	143	26.4	344	46.3		12.0	73	07.2		05.0	17	41.6		51.2	129	00.6		30.7	
15	158	28.8	359	46.2		10.9	88	07.8		05.2	32	43.5		51.0	144	03.0		30.7	
16	173	31.3	14	46.2		09.7	103	08.4		05.5	47	45.4		50.9	159	05.4		30.7	
17	188	33.8	29	46.1	+10	08.6	118	09.0	+22	05.8	62	47.3	+19	50.8	174	07.9	+3	30.7	
18	203	36.2	44	46.0	+10	07.4	133	09.6	+22	06.0	77	49.2	+19	50.7	189	10.3	+3	30.7	
19	218	38.7	59	45.9		06.3	148	10.3		06.3	92	51.1		50.5	204	12.7		30.7	
20	233	41.1	74	45.9		05.1	163	10.9		06.5	107	53.0		50.4	219	15.1		30.7	
21	248	43.6	89	45.8		04.0	178	11.5		06.8	122	54.8		50.3	234	17.5		30.7	
22	263	46.1	104	45.7		02.8	193	12.1		07.1	137	56.7		50.2	249	19.9		30.7	
23	278	48.5	119	45.7		01.7	208	12.7		07.3	152	58.6		50.0	264	22.4		30.7	
24	293	51.0	134	45.6	+10	00.5	223	13.3	+22	07.6	168	00.5	+19	49.9	279	24.8	+3	30.7	
Dif	—		-1		-11		+6		+3		+19		-1		+24				

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15 ^h 7 PMG:12 ^h 06.1 ^m			Edad: 1.6 ^d PHE { 4 ^h : 59 ^h 9 12 ^h : 59 ^h 6 20 ^h : 59 ^h 4 R°: 49 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°				
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	m	h	m	m	
0	178	29.1	+21	23.5	155	23.4	81	+17	24.8	60 N	**	**	1 48	3 05	5 53	104	21 50	1		
1	193	29.0		23.1	169	50.5	83	+17	10.9	58	**	**	2 18	22	6 04	99	43	4		
2	208	28.9		22.7	184	17.8	84	+16	56.9	56	0	52	41	36	13	95	37	8		
3	223	28.9		22.3	198	45.2	84		42.8	54	1	39	2 59	48	21	91	32	10		
4	238	28.8		21.9	213	12.8	86		28.7	52	2	07	3 14	3 59	28	88	27	13		
5	253	28.8	+21	21.5	227	40.4	86	+16	14.4	50	2	28	3 27	4 09	6 35	85	21 22	16		
6	268	28.7	+21	21.1	242	08.2	88	+16	00.1	45	3	06	3 53	4 28	6 48	80	21 12	21		
7	283	28.6		20.6	256	36.1	89	+15	45.7	40	33	4 13	44	7 00	74	21 04	26			
8	298	28.6		20.2	271	04.2	91		31.2	35	3	54	29	4 58	09	71	20 57	29		
9	313	28.5		19.8	285	32.3	91		16.7	30	4	10	4 43	5 10	18	66	51	32		
10	328	28.5		19.4	300	00.6	93	+15	02.0	20	37	5 05	30	32	61	40	38			
11	343	28.4	+21	19.0	314	29.0	94	+14	47.4	10 N	4	57	5 24	5 47	7 45	55	20 30	44		
12	358	28.3	+21	18.6	328	57.5	95	+14	32.6	0	5	14	5 40	6 03	7 56	51	20 21	48		
13	13	28.3		18.2	343	26.1	96		17.8	10 S	30	5 56	18	8 08	46	11	54			
14	28	28.2		17.8	357	54.8	97	+14	02.9	20	44	6 11	35	20	41	20	02	58		
15	43	28.2		17.3	12	23.7	99	+13	48.0	30	5	59	28	6 54	34	35	19	50		
16	58	28.1		16.9	26	52.6	99		33.0	35	6	06	38	7 05	42	32	43	69		
17	73	28.1	+21	16.5	41	21.7	101	+13	17.9	40	6	14	6 48	7 18	8 52	27	19	36		
18	88	28.0	+21	16.1	55	50.9	102	+13	02.8	45	6	23	7 00	7 33	9 02	23	19	27		
19	103	27.9		15.7	70	20.2	103	+12	47.7	50	33	14	51	15	17	16	83			
20	118	27.9		15.3	84	49.6	104		32.4	52	38	20	7 59	21	15	11	85			
21	133	27.8		14.8	99	19.1	105		17.2	54	42	27	8 09	28	11	19	05	89		
22	148	27.8		14.4	113	48.7	106	+12	01.9	56	48	35	20	35	8	18	59	92		
23	163	27.7		14.0	128	18.4	107	+11	46.5	58	53	44	32	43	5	52	96			
24	178	27.7	+21	13.6	142	48.3	109	+11	31.2	60 S	6	59	7 54	8 47	9 52	1	18	44		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 4 ^h 23.9 ^m			Mag: -4.2 PMG: 15 ^h 01 ^m			Mag: +1.4 PMG: 9 ^h 07 ^m			Mag: -1.8 PMG: 12 ^h 46 ^m			Mag: +0.7 PMG: 5 ^h 21 ^m							
	hG ♊			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°					
0	293	51.0	134	45.6	+10	00.5	223	13.3	+22	07.6	168	00.5	+19	49.9	279	24.8	+3	30.7		
1	308	53.5	149	45.5	+9	59.4	238	13.9		07.9	183	02.4		49.8	294	27.2		30.7		
2	323	55.9	164	45.5		58.2	253	14.5		08.1	198	04.3		49.7	309	29.6		30.8		
3	338	58.4	179	45.4		57.1	268	15.1		08.4	213	06.2		49.5	324	32.0		30.8		
4	354	00.9	194	45.3		55.9	283	15.7		08.6	228	08.1		49.4	339	34.4		30.8		
5	9	03.3	209	45.3	+9	54.8	298	16.4	+22	08.9	243	10.0	+19	49.3	354	36.9	+3	30.8		
6	24	05.8	224	45.2	+9	53.6	313	17.0	+22	09.2	258	11.9	+19	49.2	9	39.3	+3	30.8		
7	39	08.3	239	45.1		52.5	328	17.6		09.4	273	13.8		49.0	24	41.7		30.8		
8	54	10.7	254	45.1		51.3	343	18.2		09.7	288	15.7		48.9	39	44.1		30.8		
9	69	13.2	269	45.0		50.1	358	18.8		09.9	303	17.6		48.8	54	46.5		30.8		
10	84	15.6	284	45.0		49.0	13	19.4		10.2	318	19.5		48.7	69	48.9		30.8		
11	99	18.1	299	44.9	+9	47.8	28	20.0	+22	10.4	333	21.4	+19	48.5	84	51.4	+3	30.8		
12	114	20.6	314	44.8	+9	46.7	43	20.6	+22	10.7	348	23.3	+19	48.4	99	53.8	+3	30.8		
13	129	23.0	329	44.8		45.5	58	21.2		11.0	3	25.2		48.3	114	56.2		30.8		
14	144	25.5	344	44.7		44.4	73	21.8		11.2	18	27.1		48.2	129	58.6		30.8		
15	159	28.0	359	44.7		43.2	88	22.5		11.5	33	29.0		48.0	145	01.0		30.8		
16	174	30.4	14	44.6		42.0	103	23.1		11.7	48	30.8		47.9	160	03.5		30.8		
17	189	32.9	29	44.5	+9	40.9	118	23.7	+22	12.0	63	32.7	+19	47.8	175	05.9	+3	30.9		
18	204	35.4	44	44.5	+9	39.7	133	24.3	+22	12.2	78	34.6	+19	47.7	190	08.3	+3	30.9		
19	219	37.8	59	44.4		38.6	148	24.9		12.5	93	36.5		47.5	205	10.7		30.9		
20	234	40.3	74	44.4		37.4	163	25.5		12.7	108	38.4		47.4	220	13.1		30.9		
21	249	42.8	89	44.3		36.3	178	26.1		13.0	123	40.3		47.3	235	15.6		30.9		
22	264	45.2	104	44.3		35.1	193	26.7		13.2	138	42.2		47.2	250	18.0		30.9		
23	279	47.7	119	44.2		33.9	208	27.3		13.5	153	44.1		47.0	265	20.4		30.9		
24	294	50.1	134	44.2	+9	32.8	223	28.0	+22	13.7	168	46.0	+19	46.9	280	22.8	+3	30.9		
Dif	—			-1			-12			+6			+19			-1			+24	

UT	SOL				● LUNA						Latitud	Puesta de Sol	Fin del crepúsculo				Salida de Luna			Puesta de Luna				
	SD: 15'7 PMG:12 ^h 06.2 ^m				Edad: 2.6 ^d PHE { 4 ^h : 59'1 12 ^h : 58'8 20 ^h : 58'5 PMG: 14 ^h 58 ^m R°: 48 ^m																			
	hG ☉	Dec			hG ☾	Dif			Dec	Dif			Civil	Náutico		Hora	R°		Hora	R°				
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m		
0	178	27.7	+21	13.6	142	48.3	+11	31.2	155	58	60 N	21	04	22	18	** **	7	37	99	21	51	1		
1	193	27.6		13.1	157	18.2		15.7	154	58		20	47	21	50	** **		43	94		47	5		
2	208	27.6		12.7	171	48.2	+11	00.3	154	56			34		28	23 09		48	90		45	7		
3	223	27.5		12.3	186	18.3	+10	44.8	155	54		22	11	21	11	22 28		52	88		42	1		
4	238	27.4		11.9	200	48.6		29.2	156	52		11		20	56	22 01		7	56	85		40	13	
5	253	27.4	+21	11.5	215	18.9	+10	13.6	156	50		20	02		20 43	21 41		8	00	82		21	38	15
6	268	27.3	+21	11.0	229	49.3	+9	58.0	156	45		19	42	20	18	21 04		8	08	76		21	33	21
7	283	27.3		10.6	244	19.8		42.4	157	40			27	19	58	20 38		14	72		30	24		
8	298	27.2		10.2	258	50.4		26.7	157	35			13		42	17		20	67		26	28		
9	313	27.2		09.7	273	21.1	+9	11.0	157	30		19	02		29	20 01		24	64		23	32		
10	328	27.1		09.3	287	51.9	+8	55.3	157	20		18	42	19	06	19 35		33	58		18	37		
11	343	27.1	+21	08.9	302	22.8	+8	39.6	157	10 N		18	25		18 48	19 15		8	40	53		21	14	42
12	358	27.0	+21	08.5	316	53.7	+8	23.8	158	0		18	10		18 32	18 58		8	47	48		21	09	47
13	13	27.0		08.0	331	24.8	+8	08.1	157	10 S		17	54		17	43		8	54	43		05	52	
14	28	26.9		07.6	345	55.9	+7	52.3	158	20			38		18 01	28		9	01	38		21	00	57
15	43	26.9		07.2	0	27.1		36.4	159	30			19		17 45	14			09	32		20	55	62
16	58	26.8		06.7	14	58.4		20.6	158	35		17	08		36	18 07		14	29		52	66		
17	73	26.8	+21	06.3	29	29.8	+7	04.8	158	40		16	56		17 25	17 59		9	19	25		20	48	70
18	88	26.7	+21	05.9	44	01.2	+6	48.9	159	45		16	41		17 14	17 50		9	25	21		20	44	74
19	103	26.7		05.4	58	32.7		33.0	159	50			23		17 00	40		32	16		39	80		
20	118	26.6		05.0	73	04.4		17.2	158	52			14		16 53	36		36	13		36	83		
21	133	26.6		04.6	87	36.0	+6	01.3	159	54		16	05		47	31		39	11		34	85		
22	148	26.5		04.1	102	07.8	+5	45.4	159	56		15	54		39	26		43	8		31	88		
23	163	26.5		03.7	116	39.6		29.5	159	58			42		30	21		48	5		28	91		
24	178	26.4	+21	03.3	131	11.5	+5	13.6	159	60 S		15	28		16 21	17 15		9	53	1		20	24	96

UT	ARIES		VENUS		MARTE		JÚPITER				SATURNO							
	PMG 4 ^h 19.9 ^m		Mag: -4.2 PMG: 15 ^h 01 ^m		Mag: +1.4 PMG: 9 ^h 06 ^m		Mag: -1.8 PMG: 12 ^h 43 ^m				Mag: +0.7 PMG: 5 ^h 18 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	294	50.1	134	44.2	+9	32.8	223	28.0	+22	13.7	168	46.0	+19	46.9	280	22.8	+3	30.9
1	309	52.6	149	44.1		31.6	238	28.6		14.0	183	47.9		46.8	295	25.2		30.9
2	324	55.1	164	44.1		30.5	253	29.2		14.2	198	49.8		46.7	310	27.7		30.9
3	339	57.5	179	44.0		29.3	268	29.8		14.5	213	51.7		46.5	325	30.1		30.9
4	355	00.0	194	44.0		28.1	283	30.4		14.7	228	53.6		46.4	340	32.5		30.9
5	10	02.5	209	43.9	+9	27.0	298	31.0	+22	15.0	243	55.5	+19	46.3	355	34.9	+3	30.9
6	25	04.9	224	43.9	+9	25.8	313	31.6	+22	15.2	258	57.4	+19	46.2	10	37.4	+3	30.9
7	40	07.4	239	43.8		24.6	328	32.2		15.5	273	59.3		46.0	25	39.8		30.9
8	55	09.9	254	43.8		23.5	343	32.8		15.7	289	01.2		45.9	40	42.2		30.9
9	70	12.3	269	43.7		22.3	358	33.4		16.0	304	03.1		45.8	55	44.6		30.9
10	85	14.8	284	43.7		21.2	13	34.1		16.2	319	04.9		45.6	70	47.0		30.9
11	100	17.2	299	43.6	+9	20.0	28	34.7	+22	16.5	334	06.8	+19	45.5	85	49.5	+3	30.9
12	115	19.7	314	43.6	+9	18.8	43	35.3	+22	16.7	349	08.7	+19	45.4	100	51.9	+3	30.9
13	130	22.2	329	43.5		17.7	58	35.9		17.0	4	10.6		45.3	115	54.3		31.0
14	145	24.6	344	43.5		16.5	73	36.5		17.2	19	12.5		45.1	130	56.7		31.0
15	160	27.1	359	43.4		15.3	88	37.1		17.5	34	14.4		45.0	145	59.2		31.0
16	175	29.6	14	43.4		14.2	103	37.7		17.7	49	16.3		44.9	161	01.6		31.0
17	190	32.0	29	43.4	+9	13.0	118	38.3	+22	18.0	64	18.2	+19	44.8	176	04.0	+3	31.0
18	205	34.5	44	43.3	+9	11.8	133	38.9	+22	18.2	79	20.1	+19	44.6	191	06.4	+3	31.0
19	220	37.0	59	43.3		10.7	148	39.6		18.5	94	22.0		44.5	206	08.9		31.0
20	235	39.4	74	43.2		09.5	163	40.2		18.7	109	23.9		44.4	221	11.3		31.0
21	250	41.9	89	43.2		08.3	178	40.8		19.0	124	25.8		44.3	236	13.7		31.0
22	265	44.4	104	43.2		07.2	193	41.4		19.2	139	27.7		44.1	251	16.1		31.0
23	280	46.8	119	43.1		06.0	208	42.0		19.4	154	29.6		44.0	266	18.6		31.0
24	295	49.3	134	43.1	+9	04.8	223	42.6	+22	19.7	169	31.5	+19	43.9	281	21.0	+3	31.0
Dif	—		0	-12		+6	+2			+2	+19			-1		+24		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG:12 ^h 06.3 ^m				Edad: 3.6 ^d PHE SD: 15 ^h 9 PMG: 15 ^h 44 ^m 4^h: 58¹ 12^h: 57⁸ 20^h: 57⁵ R°: 44^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°		Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	178	26.4	+21	03.3	131	11.5	+5	13.6	60 N	** **	1 55	3 09	9 14	92	21 50 0	
1	193	26.4		02.8	145	43.5	+4	57.7	58	** **	2 23	26	16	88	51 3	
2	208	26.3		02.4	160	15.5		41.8	56	1 04	2 45	39	17	85	51 6	
3	223	26.3		02.0	174	47.6		25.9	54	1 45	3 02	3 51	18	82	51 9	
4	238	26.2		01.5	189	19.8	+4	10.0	52	2 12	17	4 02	19	79	52 11	
5	253	26.2	+21	01.1	203	52.0	+3	54.1	50	2 32	3 29	4 11	9 20	77	21 52 13	
6	268	26.1	+21	00.6	218	24.3	+3	38.2	45	3 09	3 55	4 30	9 22	72	21 52 18	
7	283	26.1	+21	00.2	232	56.7		22.3	40	35	4 14	46	24	67	53 22	
8	298	26.0	+20	59.8	247	29.1	+3	06.4	35	3 55	30	4 59	26	63	53 26	
9	313	26.0		59.3	262	01.5	+2	50.5	30	4 12	4 44	5 11	27	60	53 29	
10	328	25.9		58.9	276	34.1		34.7	20	38	5 06	30	29	55	54 34	
11	343	25.9	+20	58.4	291	06.6	+2	18.8	10 N	4 58	5 24	5 47	9 32	49	21 54 40	
12	358	25.8	+20	58.0	305	39.3	+2	03.0	0	5 15	5 41	6 03	9 33	45	21 55 44	
13	13	25.8		57.5	320	11.9	+1	47.1	10 S	30	5 56	18	35	40	55 49	
14	28	25.7		57.1	334	44.7		31.3	20	44	6 11	35	38	34	56 53	
15	43	25.7		56.7	349	17.5	+1	15.5	30	5 58	27	6 53	40	29	56 59	
16	58	25.6		56.2	3	50.3	+0	59.7	35	6 06	37	7 04	41	26	56 63	
17	73	25.6	+20	55.8	18	23.2	+0	44.0	40	6 13	6 47	7 17	9 43	22	21 57 66	
18	88	25.5	+20	55.3	32	56.1	+0	28.2	45	6 22	6 58	7 31	9 45	18	21 57 70	
19	103	25.5		54.9	47	29.1	+0	12.5	50	32	7 12	49	47	13	57 76	
20	118	25.5		54.4	62	02.1	-0	03.2	52	36	18	7 57	48	11	57 78	
21	133	25.4		54.0	76	35.1		18.9	54	41	25	8 07	49	8	58 80	
22	148	25.4		53.5	91	08.2		34.6	56	46	33	17	50	6	58 83	
23	163	25.3		53.1	105	41.4	-0	50.2	58	51	41	29	51	3	58 87	
24	178	25.3	+20	52.6	120	14.5	-1	05.8	60 S	6 57	7 51	8 43	9 53	**	21 58 91	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 16.0 ^m		Mag: -4.2 PMG: 15 ^h 01 ^m		Mag: +1.3 PMG: 9 ^h 05 ^m		Mag: -1.8 PMG: 12 ^h 40 ^m		Mag: +0.7 PMG: 5 ^h 14 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	295	49.3	134	43.1	+9	04.8	223	42.6	+22	19.7	169	31.5	+19	43.9	281	21.0	+3	31.0
1	310	51.7	149	43.0		03.7	238	43.2		19.9	184	33.4		43.7	296	23.4		31.0
2	325	54.2	164	43.0		02.5	253	43.8		20.2	199	35.3		43.6	311	25.8		31.0
3	340	56.7	179	43.0		01.3	268	44.4		20.4	214	37.1		43.5	326	28.3		31.0
4	355	59.1	194	42.9	+9	00.2	283	45.1		20.7	229	39.0		43.4	341	30.7		31.0
5	11	01.6	209	42.9	+8	59.0	298	45.7	+22	20.9	244	40.9	+19	43.2	356	33.1	+3	31.0
6	26	04.1	224	42.9	+8	57.8	313	46.3	+22	21.1	259	42.8	+19	43.1	11	35.5	+3	31.0
7	41	06.5	239	42.8		56.7	328	46.9		21.4	274	44.7		43.0	26	38.0		31.0
8	56	09.0	254	42.8		55.5	343	47.5		21.6	289	46.6		42.9	41	40.4		31.0
9	71	11.5	269	42.8		54.3	358	48.1		21.9	304	48.5		42.7	56	42.8		31.0
10	86	13.9	284	42.7		53.2	13	48.7		22.1	319	50.4		42.6	71	45.2		31.0
11	101	16.4	299	42.7	+8	52.0	28	49.3	+22	22.3	334	52.3	+19	42.5	86	47.7	+3	31.0
12	116	18.9	314	42.7	+8	50.8	43	49.9	+22	22.6	349	54.2	+19	42.4	101	50.1	+3	31.0
13	131	21.3	329	42.7		49.6	58	50.6		22.8	4	56.1		42.2	116	52.5		31.0
14	146	23.8	344	42.6		48.5	73	51.2		23.1	19	58.0		42.1	131	54.9		31.0
15	161	26.2	359	42.6		47.3	88	51.8		23.3	34	59.9		42.0	146	57.4		31.0
16	176	28.7	14	42.6		46.1	103	52.4		23.5	50	01.8		41.8	161	59.8		31.0
17	191	31.2	29	42.5	+8	44.9	118	53.0	+22	23.8	65	03.7	+19	41.7	177	02.2	+3	31.0
18	206	33.6	44	42.5	+8	43.8	133	53.6	+22	24.0	80	05.6	+19	41.6	192	04.7	+3	31.1
19	221	36.1	59	42.5		42.6	148	54.2		24.2	95	07.5		41.5	207	07.1		31.1
20	236	38.6	74	42.5		41.4	163	54.8		24.5	110	09.3		41.3	222	09.5		31.1
21	251	41.0	89	42.4		40.3	178	55.5		24.7	125	11.2		41.2	237	11.9		31.1
22	266	43.5	104	42.4		39.1	193	56.1		24.9	140	13.1		41.1	252	14.4		31.1
23	281	46.0	119	42.4		37.9	208	56.7		25.2	155	15.0		40.9	267	16.8		31.1
24	296	48.4	134	42.4	+8	36.7	223	57.3	+22	25.4	170	16.9	+19	40.8	282	19.2	+3	31.1
Dif	—		0		-12		+6		+2		+19		-1		+24			

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG:12 ^h 06.3 ^m				Edad: 4.6 ^d SD: 15'6 PMG: 16 ^h 28 ^m						PHE { 4 ^h : 57'2 12 ^h : 56'9 20 ^h : 56'6 R°: 45 ^m							
	hG ☉	Dec			hG ☾	Dif		Dec			Dif							
h	°	/	°	/	°	/	°	/	°	h	m	h	m	h	m	h	m	
0	178	25.3	+20	52.6	120	14.5	-1	05.8	60 N	21	00	22	12	10	46	91	21	50
1	193	25.2		52.2	134	47.7		21.4	58	20	44	21	45		44	87		54
2	208	25.2		51.7	149	21.0		36.9	56		31	24	22	59	42	84	21	57
3	223	25.1		51.3	163	54.3	-1	52.5	54	19	21	08	22	22	40	81	22	00
4	238	25.1		50.8	178	27.6	-2	08.0	52	09	20	53	21	57	38	79		03
5	253	25.1	+20	50.4	193	00.9	-2	23.4	50	20	00	20	41	21	38	10	37	76
6	268	25.0	+20	49.9	207	34.3	-2	38.9	45	19	41	20	16	21	02	10	34	71
7	283	25.0		49.4	222	07.7	-2	54.3	40		25	19	57	20	36	31	67	15
8	298	24.9		49.0	236	41.1	-3	09.6	35		12		41	16		29	63	19
9	313	24.9		48.5	251	14.5		25.0	30	19	01		28	20	00	27	60	22
10	328	24.9		48.1	265	48.0		40.3	20	18	42	19	06	19	34	24	54	28
11	343	24.8	+20	47.6	280	21.5	-3	55.5	10 N	18	25	18	48	19	14	10	21	49
12	358	24.8	+20	47.2	294	55.0	-4	10.8	0	18	10	18	32	18	58	10	18	45
13	13	24.7		46.7	309	28.5		25.9	10 S	17	55		17		43	15	40	44
14	28	24.7		46.2	324	02.1		41.1	20		38	18	02	29	12	36		49
15	43	24.7		45.8	338	35.7	-4	56.2	30		20	17	46	15	09	30		55
16	58	24.6		45.3	353	09.2	-5	11.3	35	17	09		37	08	07	27	22	59
17	73	24.6	+20	44.9	7	42.9	-5	26.3	40	16	57	17	27	18	00	10	05	24
18	88	24.5	+20	44.4	22	16.5	-5	41.3	45	16	43	17	15	17	52	10	03	19
19	103	24.5		43.9	36	50.1	-5	56.2	50		25	17	02	42	10	00	15	13
20	118	24.5		43.5	51	23.7	-6	11.1	52		17	16	56	38	9	59	12	15
21	133	24.4		43.0	65	57.4		26.0	54	16	08		49	33	57	11		18
22	148	24.4		42.5	80	31.1		40.8	56	15	57		42	29	56	7		21
23	163	24.3		42.1	95	04.7	-6	55.5	58		45		33	23	54	5		25
24	178	24.3	+20	41.6	109	38.4	-7	10.2	60 S	15	32	16	24	17	18	9	52	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 12.1 ^m		Mag: -4.2 PMG: 15 ^h 01 ^m		Mag: +1.3 PMG: 9 ^h 04 ^m		Mag: -1.8 PMG: 12 ^h 37 ^m		Mag: +0.7 PMG: 5 ^h 10 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	/	°	/	°	/	°	/	°	/
0	296	48.4	134	42.4	+8	36.7	223	57.3	+22	25.4
1	311	50.9	149	42.3		35.6	238	57.9		25.6
2	326	53.3	164	42.3		34.4	253	58.5		25.9
3	341	55.8	179	42.3		33.2	268	59.1		26.1
4	356	58.3	194	42.3		32.0	283	59.7		26.3
5	12	00.7	209	42.3	+8	30.9	299	00.3	+22	26.6
6	27	03.2	224	42.2	+8	29.7	314	01.0	+22	26.8
7	42	05.7	239	42.2		28.5	329	01.6		27.0
8	57	08.1	254	42.2		27.3	344	02.2		27.3
9	72	10.6	269	42.2		26.1	359	02.8		27.5
10	87	13.1	284	42.2		25.0	14	03.4		27.7
11	102	15.5	299	42.2	+8	23.8	29	04.0	+22	28.0
12	117	18.0	314	42.1	+8	22.6	44	04.6	+22	28.2
13	132	20.5	329	42.1		21.4	59	05.2		28.4
14	147	22.9	344	42.1		20.3	74	05.9		28.7
15	162	25.4	359	42.1		19.1	89	06.5		28.9
16	177	27.8	14	42.1		17.9	104	07.1		29.1
17	192	30.3	29	42.1	+8	16.7	119	07.7	+22	29.3
18	207	32.8	44	42.1	+8	15.5	134	08.3	+22	29.6
19	222	35.2	59	42.1		14.4	149	08.9		29.8
20	237	37.7	74	42.0		13.2	164	09.5		30.0
21	252	40.2	89	42.0		12.0	179	10.1		30.3
22	267	42.6	104	42.0		10.8	194	10.8		30.5
23	282	45.1	119	42.0		09.6	209	11.4		30.7
24	297	47.6	134	42.0	+8	08.5	224	12.0	+22	30.9
Dif	—		0	-12		+6	+2	+19		-1

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 06.4 ^m				Edad: 5.6 ^d SD: 15 ^h 4 PMG: 17 ^h 12 ^m														
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	178	24.3	+20	41.6	109	38.4			-7	10.2			60 N	** **	2 01	3 14	12 16	90	21 50 1
1	193	24.3		41.1	124	12.1				24.9			58	** **	28	29	10 85		21 57 5
2	208	24.2		40.7	138	45.8				39.5			56	1 14	2 49	43	04 83		22 04 8
3	223	24.2		40.2	153	19.5			-7	54.1			54	1 51	3 06	3 54	12 00	79	09 1
4	238	24.2		39.7	167	53.2			-8	08.6			52	2 16	20	4 04	11 55	77	14 14
5	253	24.1	+20	39.3	182	26.9			-8	23.0			50	2 36	3 32	4 13	11 52	73	22 19 16
6	268	24.1	+20	38.8	197	00.6			-8	37.4			45	3 11	3 57	4 32	11 43	69	22 29 21
7	283	24.0		38.3	211	34.3			-8	51.8			40	37	4 16	4 48	36 65		38 25
8	298	24.0		37.9	226	08.0			-9	06.1			35	3 57	32	5 01	30 61		45 28
9	313	24.0		37.4	240	41.6				20.3			30	4 13	4 45	12	25 58		22 52 31
10	328	23.9		36.9	255	15.3				34.5			20	39	5 07	31	16 53		23 03 36
11	343	23.9	+20	36.4	269	49.0			-9	48.7			10 N	4 58	5 25	5 48	11 08	48	23 13 40
12	358	23.9	+20	36.0	284	22.7			-10	02.7			0	5 15	5 41	6 03	11 01	44	23 22 44
13	13	23.8		35.5	298	56.3				16.7			10 S	30	5 56	18	10 54	40	31 49
14	28	23.8		35.0	313	30.0				30.7			20	44	6 11	34	46 35		41 53
15	43	23.8		34.6	328	03.7				44.6			30	5 57	27	6 52	38 30		23 53 58
16	58	23.7		34.1	342	37.3			-10	58.4			35	6 05	36	7 03	33 27		** ** *
17	73	23.7	+20	33.6	357	10.9			-11	12.2			40	6 12	6 46	7 15	10 27	24	** ** *
18	88	23.7	+20	33.1	11	44.5			-11	25.9			45	6 21	6 57	7 29	10 21	20	** ** *
19	103	23.6		32.6	26	18.1				39.6			50	30	7 10	47	13 15		** ** *
20	118	23.6		32.2	40	51.7			-11	53.2			52	34	16	7 55	10 12		** ** *
21	133	23.6		31.7	55	25.3			-12	06.7			54	39	23	8 04	06 10		** ** *
22	148	23.5		31.2	69	58.8				20.2			56	43	30	15	10 02	7	** ** *
23	163	23.5		30.7	84	32.4				33.6			58	49	39	26	9 57	4	** ** *
24	178	23.5	+20	30.3	99	05.9			-12	46.9			60 S	6 54	7 48	8 40	9 52	0	** ** *

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 08.2 ^m		Mag: -4.2 PMG: 15 ^h 01 ^m		Mag: +1.3 PMG: 9 ^h 03 ^m		Mag: -1.8 PMG: 12 ^h 34 ^m		Mag: +0.7 PMG: 5 ^h 06 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	297	47.6	134	42.0	+8	08.5	224	12.0	+22	30.9	171	02.4	+19	37.8	283	17.6	+3	31.1
1	312	50.0	149	42.0		07.3	239	12.6		31.2	186	04.3		37.6	298	20.0		31.1
2	327	52.5	164	42.0		06.1	254	13.2		31.4	201	06.2		37.5	313	22.4		31.1
3	342	54.9	179	42.0		04.9	269	13.8		31.6	216	08.1		37.4	328	24.9		31.1
4	357	57.4	194	42.0		03.7	284	14.4		31.8	231	10.0		37.2	343	27.3		31.1
5	12	59.9	209	42.0	+8	02.6	299	15.0	+22	32.1	246	11.9	+19	37.1	358	29.7	+3	31.1
6	28	02.3	224	42.0	+8	01.4	314	15.7	+22	32.3	261	13.7	+19	37.0	13	32.2	+3	31.1
7	43	04.8	239	42.0	+8	00.2	329	16.3		32.5	276	15.6		36.9	28	34.6		31.1
8	58	07.3	254	42.0	+7	59.0	344	16.9		32.7	291	17.5		36.7	43	37.0		31.1
9	73	09.7	269	42.0		57.8	359	17.5		33.0	306	19.4		36.6	58	39.5		31.1
10	88	12.2	284	42.0		56.6	14	18.1		33.2	321	21.3		36.5	73	41.9		31.1
11	103	14.7	299	42.0	+7	55.5	29	18.7	+22	33.4	336	23.2	+19	36.3	88	44.3	+3	31.1
12	118	17.1	314	42.0	+7	54.3	44	19.3	+22	33.6	351	25.1	+19	36.2	103	46.8	+3	31.1
13	133	19.6	329	42.0		53.1	59	19.9		33.8	6	27.0		36.1	118	49.2		31.1
14	148	22.1	344	42.0		51.9	74	20.6		34.1	21	28.9		36.0	133	51.6		31.1
15	163	24.5	359	42.0		50.7	89	21.2		34.3	36	30.8		35.8	148	54.1		31.1
16	178	27.0	14	42.0		49.5	104	21.8		34.5	51	32.7		35.7	163	56.5		31.1
17	193	29.4	29	42.0	+7	48.3	119	22.4	+22	34.7	66	34.6	+19	35.6	178	58.9	+3	31.1
18	208	31.9	44	42.0	+7	47.2	134	23.0	+22	34.9	81	36.5	+19	35.4	194	01.4	+3	31.1
19	223	34.4	59	42.0		46.0	149	23.6		35.2	96	38.4		35.3	209	03.8		31.1
20	238	36.8	74	42.0		44.8	164	24.2		35.4	111	40.3		35.2	224	06.2		31.1
21	253	39.3	89	42.0		43.6	179	24.9		35.6	126	42.2		35.0	239	08.7		31.1
22	268	41.8	104	42.0		42.4	194	25.5		35.8	141	44.0		34.9	254	11.1		31.1
23	283	44.2	119	42.0		41.2	209	26.1		36.0	156	45.9		34.8	269	13.6		31.1
24	298	46.7	134	42.0	+7	40.0	224	26.7	+22	36.2	171	47.8	+19	34.7	284	16.0	+3	31.1
Dif	—		0		-12		+6		+2		+19		-1		+24		0	

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG:12 ^h 06.5 ^m				Edad: 6.6 ^d SD: 15'2 PMG: 17 ^h 56 ^m PHE { 4 ^h : 55'6 12 ^h : 55'4 20 ^h : 55'2 Rº: 46 ^m											
	hG ☉	Dec			hG ☾	Dif		Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	23.5	+20	30.3	99	05.9	-12	46.9	60 N	20 56	22 06	** **	13 46	93	21 51	3
1	193	23.4		29.8	113	39.4 ¹⁴⁵	-13	00.1 ¹³²	58	40	21 40	** **	35 88		22 02	8
2	208	23.4		29.3	128	12.9 ¹⁴⁵		13.3 ¹³²	56	28	20	22 50	27 83		12 12	
3	223	23.4		28.8	142	46.3 ¹⁴⁴		26.5 ¹³²	54	16	21 04	22 16	19 80		20 16	
4	238	23.3		28.3	157	19.8 ¹⁴⁵		39.5 ¹³⁰	52	20 06	20 50	21 53	12 77		28 19	
5	253	23.3	+20	27.8	171	53.2 ¹⁴⁴	-13	52.5 ¹³⁰	50	19 58	20 38	21 34	13 05	75	22 35	21
6	268	23.3	+20	27.4	186	26.5 ¹⁴³	-14	05.4 ¹²⁹	45	19 39	20 14	20 59	12 52	69	22 50	26
7	283	23.2		26.9	200	59.9 ¹⁴⁴		18.3 ¹²⁹	40	24	19 55	34	41 65		23 03	29
8	298	23.2		26.4	215	33.2 ¹⁴³		31.0 ¹²⁷	35	11	40	20 15	31 62		13 33	
9	313	23.2		25.9	230	06.6 ¹⁴⁴		43.7 ¹²⁷	30	19 00	27	19 59	23 59		23 35	
10	328	23.2		25.4	244	39.8 ¹⁴²	-14	56.4 ¹²⁷	20	18 41	19 05	34	12 09	54	39 40	
11	343	23.1	+20	24.9	259	13.1 ¹⁴³	-15	08.9 ¹²⁵	10 N	18 25	18 48	19 14	11 56	50	23 53	44
12	358	23.1	+20	24.4	273	46.3 ¹⁴²	-15	21.4 ¹²⁵	0	18 10	18 32	18 58	11 45	46	** **	**
13	13	23.1		24.0	288	19.5 ¹⁴²		33.8 ¹²⁴	10 S	17 55	17	43	34 42		** **	**
14	28	23.0		23.5	302	52.7 ¹⁴²		46.1 ¹²³	20	39	18 03	30	21 39		** **	**
15	43	23.0		23.0	317	25.8 ¹⁴¹	-15	58.4 ¹²³	30	21	17 47	16	08 34		** **	**
16	58	23.0		22.5	331	58.9 ¹⁴¹	-16	10.5 ¹²¹	35	17 11	38	09	11 00	31	0 00	62
17	73	23.0	+20	22.0	346	32.0 ¹⁴¹	-16	22.6 ¹²¹	40	16 59	17 28	18 01	10 51	28	0 07	66
18	88	22.9	+20	21.5	1	05.0 ¹⁴⁰	-16	34.6 ¹²⁰	45	16 45	17 17	17 53	10 41	23	0 16	70
19	103	22.9		21.0	15	38.0 ¹⁴⁰		46.6 ¹²⁰	50	28	17 04	44	28 19		27 75	
20	118	22.9		20.5	30	10.9 ¹³⁹	-16	58.4 ¹¹⁸	52	19	16 58	40	22 17		32 77	
21	133	22.9		20.0	44	43.9 ¹⁴⁰	-17	10.2 ¹¹⁸	54	10	52	36	16 14		38 80	
22	148	22.8		19.5	59	16.8 ¹³⁹		21.9 ¹¹⁷	56	16 00	44	31	09 11		44 83	
23	163	22.8		19.1	73	49.6 ¹³⁸		33.5 ¹¹⁶	58	15 49	36	26	10 01	7	51 87	
24	178	22.8	+20	18.6	88	22.4 ¹³⁸	-17	45.0 ¹¹⁵	60 S	15 35	16 27	17 20	9 52	3	0 59	91

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 04.2 ^m		Mag: -4.2 PMG: 15 ^h 01 ^m		Mag: +1.3 PMG: 9 ^h 02 ^m		Mag: -1.8 PMG: 12 ^h 31 ^m		Mag: +0.7 PMG: 5 ^h 02 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	298	46.7	134	42.0	+7	40.0	224	26.7	+22	36.2	171	47.8	+19	34.7	284	16.0	+3	31.1
1	313	49.2	149	42.0		38.8	239	27.3		36.5	186	49.7		34.5	299	18.4		31.1
2	328	51.6	164	42.0		37.7	254	27.9		36.7	201	51.6		34.4	314	20.9		31.1
3	343	54.1	179	42.0		36.5	269	28.5		36.9	216	53.5		34.3	329	23.3		31.1
4	358	56.6	194	42.1		35.3	284	29.1		37.1	231	55.4		34.1	344	25.7		31.1
5	13	59.0	209	42.1	+7	34.1	299	29.8	+22	37.3	246	57.3	+19	34.0	359	28.2	+3	31.1
6	29	01.5	224	42.1	+7	32.9	314	30.4	+22	37.5	261	59.2	+19	33.9	14	30.6	+3	31.1
7	44	03.9	239	42.1		31.7	329	31.0		37.8	277	01.1		33.8	29	33.1		31.1
8	59	06.4	254	42.1		30.5	344	31.6		38.0	292	03.0		33.6	44	35.5		31.1
9	74	08.9	269	42.1		29.3	359	32.2		38.2	307	04.9		33.5	59	37.9		31.1
10	89	11.3	284	42.1		28.2	14	32.8		38.4	322	06.8		33.4	74	40.4		31.1
11	104	13.8	299	42.1	+7	27.0	29	33.4	+22	38.6	337	08.7	+19	33.2	89	42.8	+3	31.1
12	119	16.3	314	42.1	+7	25.8	44	34.1	+22	38.8	352	10.6	+19	33.1	104	45.2	+3	31.1
13	134	18.7	329	42.2		24.6	59	34.7		39.0	7	12.5		33.0	119	47.7		31.1
14	149	21.2	344	42.2		23.4	74	35.3		39.3	22	14.4		32.9	134	50.1		31.1
15	164	23.7	359	42.2		22.2	89	35.9		39.5	37	16.2		32.7	149	52.6		31.1
16	179	26.1	14	42.2		21.0	104	36.5		39.7	52	18.1		32.6	164	55.0		31.1
17	194	28.6	29	42.2	+7	19.8	119	37.1	+22	39.9	67	20.0	+19	32.5	179	57.4	+3	31.1
18	209	31.0	44	42.2	+7	18.6	134	37.7	+22	40.1	82	21.9	+19	32.3	194	59.9	+3	31.0
19	224	33.5	59	42.3		17.4	149	38.4		40.3	97	23.8		32.2	210	02.3		31.0
20	239	36.0	74	42.3		16.2	164	39.0		40.5	112	25.7		32.1	225	04.8		31.0
21	254	38.4	89	42.3		15.0	179	39.6		40.7	127	27.6		31.9	240	07.2		31.0
22	269	40.9	104	42.3		13.9	194	40.2		40.9	142	29.5		31.8	255	09.6		31.0
23	284	43.4	119	42.4		12.7	209	40.8		41.1	157	31.4		31.7	270	12.1		31.0
24	299	45.8	134	42.4	+7	11.5	224	41.4	+22	41.4	172	33.3	+19	31.6	285	14.5	+3	31.0
Dif	—		0		-12		+6		+2		+19		-1		+24		0	

UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h /7 PMG: 12 ^h 06.5 ^m			Edad: 7.6 ^d PHE { 4 ^h : 55 ⁰ 12 ^h : 54 ⁸ 20 ^h : 54 ⁷ R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	h	m
0	178	22.8	+20	18.6	88	22.4	138	-17	45.0	115	60 N	** **	2 08	3 18	15 17	93	21 53	5
1	193	22.8		18.1	102	55.2	137	-17	56.5	113	58	** **	33	33	15 02	86	22 09	11
2	208	22.7		17.6	117	27.9	137	-18	07.8	113	56	1 23	2 53	46	14 49	81	23 16	
3	223	22.7		17.1	132	00.6	137		19.1	113	54	1 57	3 09	3 57	37 78	35 19		
4	238	22.7		16.6	146	33.3	137		30.3	112	52	2 21	23	4 07	27 75	45 23		
5	253	22.7	+20	16.1	161	05.9	136	-18	41.4	111	50	2 39	3 35	4 16	14 18	72	22 55	25
6	268	22.6	+20	15.6	175	38.5	136	-18	52.4	110	45	3 14	3 59	4 34	14 00	66	23 15	29
7	283	22.6		15.1	190	11.0	135	-19	03.3	109	40	39	4 18	4 49	13 44	63	31 33	
8	298	22.6		14.6	204	43.5	135		14.1	108	35	3 59	34	5 02	32 60		45 35	
9	313	22.6		14.1	219	15.9	134		24.9	108	30	4 15	4 47	13	20 58	23 57	38	
10	328	22.5		13.6	233	48.3	134		35.5	106	20	40	5 08	32	13 01	54	** **	** **
11	343	22.5	+20	13.1	248	20.7	134	-19	46.1	106	10 N	4 59	5 25	5 48	12 45	50	** **	** **
12	358	22.5	+20	12.6	262	53.0	133	-19	56.6	105	0	5 15	5 41	6 03	12 30	47	0 06	46
13	13	22.5		12.1	277	25.2	132	-20	07.0	104	10 S	30	5 55	18	12 15	43	20 49	
14	28	22.4		11.6	291	57.4	132		17.2	102	20	43	6 10	34	11 59	40	34 53	
15	43	22.4		11.1	306	29.6	132		27.4	102	30	5 57	26	6 52	40 36	0 51	57	
16	58	22.4		10.6	321	01.7	131		37.5	101	35	6 04	35	7 02	29 34	1 00	61	
17	73	22.4	+20	10.1	335	33.8	131	-20	47.5	100	40	6 11	6 44	7 14	11 17	31	1 11	64
18	88	22.4	+20	09.6	350	05.9	131	-20	57.4	99	45	6 19	6 55	7 28	11 03	27	1 24	68
19	103	22.3		09.1	4	37.8	129	-21	07.3	99	50	28	7 08	45	10 46	22	40 73	
20	118	22.3		08.6	19	09.8	130		17.0	97	52	32	14	7 53	38 19	48 75		
21	133	22.3		08.0	33	41.7	129		26.6	96	54	37	21	8 02	29 16	1 56	78	
22	148	22.3		07.5	48	13.5	128		36.1	95	56	41	28	12	18 14	2 06	81	
23	163	22.3		07.0	62	45.3	128		45.5	94	58	46	36	23	10 07	9	17 86	
24	178	22.2	+20	06.5	77	17.0	127	-21	54.8	93	60 S	6 52	7 45	8 36	9 54	3	2 29	92
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 4 ^h 00.3 ^m		Mag: -4.2 PMG: 15 ^h 01 ^m			Mag: +1.3 PMG: 9 ^h 01 ^m			Mag: -1.8 PMG: 12 ^h 28 ^m			Mag: +0.7 PMG: 4 ^h 58 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	299	45.8	134	42.4	+7	11.5	224	41.4	+22	41.4	172	33.3	+19	31.6	285	14.5	+3	31.0
1	314	48.3	149	42.4		10.3	239	42.0		41.6	187	35.2		31.4	300	17.0		31.0
2	329	50.8	164	42.4		09.1	254	42.7		41.8	202	37.1		31.3	315	19.4		31.0
3	344	53.2	179	42.4		07.9	269	43.3		42.0	217	39.0		31.2	330	21.8		31.0
4	359	55.7	194	42.5		06.7	284	43.9		42.2	232	40.9		31.0	345	24.3		31.0
5	14	58.2	209	42.5	+7	05.5	299	44.5	+22	42.4	247	42.8	+19	30.9	0	26.7	+3	31.0
6	30	00.6	224	42.5	+7	04.3	314	45.1	+22	42.6	262	44.7	+19	30.8	15	29.2	+3	31.0
7	45	03.1	239	42.5		03.1	329	45.7		42.8	277	46.6		30.6	30	31.6		31.0
8	60	05.5	254	42.6		01.9	344	46.3		43.0	292	48.4		30.5	45	34.1		31.0
9	75	08.0	269	42.6	+7	00.7	359	47.0		43.2	307	50.3		30.4	60	36.5		31.0
10	90	10.5	284	42.6	+6	59.5	14	47.6		43.4	322	52.2		30.3	75	38.9		31.0
11	105	12.9	299	42.7	+6	58.3	29	48.2	+22	43.6	337	54.1	+19	30.1	90	41.4	+3	31.0
12	120	15.4	314	42.7	+6	57.1	44	48.8	+22	43.8	352	56.0	+19	30.0	105	43.8	+3	31.0
13	135	17.9	329	42.7		55.9	59	49.4		44.0	7	57.9		29.9	120	46.3		31.0
14	150	20.3	344	42.7		54.7	74	50.0		44.2	22	59.8		29.7	135	48.7		31.0
15	165	22.8	359	42.8		53.6	89	50.7		44.4	38	01.7		29.6	150	51.2		31.0
16	180	25.3	14	42.8		52.4	104	51.3		44.6	53	03.6		29.5	165	53.6		31.0
17	195	27.7	29	42.8	+6	51.2	119	51.9	+22	44.8	68	05.5	+19	29.3	180	56.0	+3	31.0
18	210	30.2	44	42.9	+6	50.0	134	52.5	+22	45.0	83	07.4	+19	29.2	195	58.5	+3	31.0
19	225	32.7	59	42.9		48.8	149	53.1		45.2	98	09.3		29.1	211	00.9		31.0
20	240	35.1	74	42.9		47.6	164	53.7		45.4	113	11.2		29.0	226	03.4		31.0
21	255	37.6	89	43.0		46.4	179	54.3		45.6	128	13.1		28.8	241	05.8		31.0
22	270	40.0	104	43.0		45.2	194	55.0		45.8	143	15.0		28.7	256	08.3		31.0
23	285	42.5	119	43.0		44.0	209	55.6		46.0	158	16.9		28.6	271	10.7		30.9
24	300	45.0	134	43.1	+6	42.8	224	56.2	+22	46.2	173	18.8	+19	28.4	286	13.1	+3	30.9
Dif	—		0		-12		+6		+2		+19		-1		+24		0	

UT	SOL			☾ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'7 PMG:12 ^h 06.5 ^m			Edad: 8.6 ^d SD: 14'9 PMG: 19 ^h 28 ^m			PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3 R°: 51 ^m													
	hG ☉	Dec		hG ☾	Dif		Dec	Dif							Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	178	22.2	+20	06.5	77	17.0	127	-21	54.8	93	60 N	20 51	21 59	** **	16 50	91	21 58	14		
1	193	22.2		06.0	91	48.7	127	-22	04.1	91	58	37	35	** **	28 83		22 20	22		
2	208	22.2		05.5	106	20.4	127		13.2	90	56	24	16	22 42	16 10	78	39 27			
3	223	22.2		05.0	120	51.9	125		22.2	89	54	13	21 00	22 11	15 55	74	22 54 31			
4	238	22.2		04.5	135	23.5	126		31.1	88	52	20 04	20 47	21 48	42 71		23 08 33			
5	253	22.1	+20	04.0	149	55.0	125	-22	39.9	87	50	19 55	20 35	21 30	15 30	70	23 20 34			
6	268	22.1	+20	03.5	164	26.4	124	-22	48.6	86	45	19 37	20 12	20 56	15 06	66	23 44 39			
7	283	22.1		02.9	178	57.8	124	-22	57.2	85	40	22	19 53	32	14 47	63	** ** *			
8	298	22.1		02.4	193	29.2	124	-23	05.7	85	35	19 10	38	20 13	32 60		** ** *			
9	313	22.1		01.9	208	00.4	122		14.1	84	30	18 59	26	19 57	14 18	58	** ** *			
10	328	22.1		01.4	222	31.7	123		22.4	83	20	41	19 05	33	13 55	55	0 17 44			
11	343	22.0	+20	00.9	237	02.9	122	-23	30.6	82	10 N	18 25	18 47	19 14	13 35	53	0 35 47			
12	358	22.0	+20	00.4	251	34.0	121	-23	38.6	80	0	18 10	18 32	18 58	13 17	50	0 52 49			
13	13	22.0	+19	59.9	266	05.1	121		46.6	78	10 S	17 55	18	44	12 58	48	1 09 52			
14	28	22.0		59.3	280	36.1	120	-23	54.4	78	20	40	18 03	30	39 45		27 55			
15	43	22.0		58.8	295	07.1	120	-24	02.2	78	30	22	17 48	17	16 42	1 48	59			
16	58	22.0		58.3	309	38.1	120		09.8	76	35	12	39	10	12 03	40	2 01 61			
17	73	21.9	+19	57.8	324	09.0	119	-24	17.3	75	40	17 00	17 30	18 03	11 48	37	2 15 64			
18	88	21.9	+19	57.3	338	39.8	118	-24	24.7	74	45	16 47	17 19	17 55	11 30	35	2 32 67			
19	103	21.9		56.8	353	10.6	118		32.0	73	50	30	06	46	11 08	30	2 53 72			
20	118	21.9		56.2	7	41.3	117		39.2	72	52	22	17 00	42	10 57	28	3 03 74			
21	133	21.9		55.7	22	12.0	117		46.3	69	54	13	16 54	38	45 26		14 77			
22	148	21.9		55.2	36	42.6	116	-24	53.2	69	56	16 04	47	34	32 22		27 81			
23	163	21.9		54.7	51	13.2	116	-25	00.1	69	58	15 52	39	29	10 16	17	3 43 85			
24	178	21.8	+19	54.2	65	43.8	116	-25	06.8	67	60 S	15 39	16 30	17 24	9 57	10	4 01 93			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 3 ^h 56.4 ^m		Mag: -4.2 PMG: 15 ^h 01 ^m		Mag: +1.3 PMG: 9 ^h 00 ^m		Mag: -1.8 PMG: 12 ^h 25 ^m		Mag: +0.7 PMG: 4 ^h 54 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	300	45.0	134	43.1	+6	42.8	224	56.2	+22	46.2	173	18.8	+19	28.4	286	13.1	+3	30.9
1	315	47.4	149	43.1		41.6	239	56.8		46.4	188	20.6		28.3	301	15.6		30.9
2	330	49.9	164	43.2		40.4	254	57.4		46.6	203	22.5		28.2	316	18.0		30.9
3	345	52.4	179	43.2		39.2	269	58.0		46.8	218	24.4		28.0	331	20.5		30.9
4	0	54.8	194	43.2		38.0	284	58.7		47.0	233	26.3		27.9	346	22.9		30.9
5	15	57.3	209	43.3	+6	36.8	299	59.3	+22	47.2	248	28.2	+19	27.8	1	25.4	+3	30.9
6	30	59.8	224	43.3	+6	35.6	314	59.9	+22	47.4	263	30.1	+19	27.6	16	27.8	+3	30.9
7	46	02.2	239	43.4		34.4	330	00.5		47.6	278	32.0		27.5	31	30.3		30.9
8	61	04.7	254	43.4		33.2	345	01.1		47.8	293	33.9		27.4	46	32.7		30.9
9	76	07.1	269	43.4		32.0	0	01.7		48.0	308	35.8		27.3	61	35.2		30.9
10	91	09.6	284	43.5		30.8	15	02.3		48.2	323	37.7		27.1	76	37.6		30.9
11	106	12.1	299	43.5	+6	29.6	30	03.0	+22	48.4	338	39.6	+19	27.0	91	40.0	+3	30.9
12	121	14.5	314	43.6	+6	28.4	45	03.6	+22	48.6	353	41.5	+19	26.9	106	42.5	+3	30.9
13	136	17.0	329	43.6		27.2	60	04.2		48.8	8	43.4		26.7	121	44.9		30.9
14	151	19.5	344	43.7		26.0	75	04.8		49.0	23	45.3		26.6	136	47.4		30.9
15	166	21.9	359	43.7		24.8	90	05.4		49.2	38	47.2		26.5	151	49.8		30.9
16	181	24.4	14	43.7		23.6	105	06.0		49.4	53	49.1		26.3	166	52.3		30.9
17	196	26.9	29	43.8	+6	22.4	120	06.7	+22	49.6	68	51.0	+19	26.2	181	54.7	+3	30.9
18	211	29.3	44	43.8	+6	21.2	135	07.3	+22	49.8	83	52.8	+19	26.1	196	57.2	+3	30.9
19	226	31.8	59	43.9		20.0	150	07.9		50.0	98	54.7		25.9	211	59.6		30.8
20	241	34.3	74	43.9		18.8	165	08.5		50.2	113	56.6		25.8	227	02.1		30.8
21	256	36.7	89	44.0		17.6	180	09.1		50.4	128	58.5		25.7	242	04.5		30.8
22	271	39.2	104	44.0		16.4	195	09.7		50.6	144	00.4		25.5	257	07.0		30.8
23	286	41.6	119	44.1		15.2	210	10.4		50.7	159	02.3		25.4	272	09.4		30.8
24	301	44.1	134	44.1	+6	14.0	225	11.0	+22	50.9	174	04.2	+19	25.3	287	11.9	+3	30.8
Dif	—		0		-12		+6		+2		+19		-1		+24		0	

UT	SOL				LUNA								Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^h 7 PMG:12 ^h 06.6 ^m				Edad: 9.6 ^d PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/1 R°: 51 ^m																			
	hG ☉		Dec		hG ☾		Dif		Dec		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m		
0	178	21.8	+19	54.2	65	43.8	-25	06.8	115		66	60 N	**	**	2	14	3	22	18	20	75	22	10	30
1	193	21.8		53.6	80	14.3		13.4	114		65	58	0	26	38	37	17	49	69	22	41	37		
2	208	21.8		53.1	94	44.7		19.9	114		63	56	1	32	2	57	3	49	26	66	23	04	40	
3	223	21.8		52.6	109	15.1		26.2	114		63	54	2	03	3	13	4	00	17	08	63	23	42	
4	238	21.8		52.1	123	45.5		32.5	114		61	52		25		26	10	16	52	62		39	43	
5	253	21.8	+19	51.5	138	15.8	-25	38.6	113		60	50	2	43	3	38	4	18	16	38	61	23	53	44
6	268	21.8	+19	51.0	152	46.0	-25	44.6	112		60	45	3	17	4	02	4	36	16	10	59	**	**	**
7	283	21.8		50.5	167	16.2		50.5	112		59	40	3	41		20	4	51	15	49	57	0	04	40
8	298	21.7		50.0	181	46.4	-25	56.3	112		58	35	4	00		35	5	03		31	55		20	42
9	313	21.7		49.4	196	16.5	-26	02.0	111		57	30		16	4	48	14	15	15	55		35	43	
10	328	21.7		48.9	210	46.6		07.5	111		55	20	4	40	5	09	33	14	49	53	0	59	46	
11	343	21.7	+19	48.4	225	16.6	-26	12.9	110		54	10 N	5	00	5	26	5	48	14	26	52	1	20	48
12	358	21.7	+19	47.8	239	46.6	-26	18.2	110		53	0	5	15	5	41	6	03	14	05	51	1	40	50
13	13	21.7		47.3	254	16.5		23.4	109		52	10 S		30	5	55	18	13	45	49	2	00	51	
14	28	21.7		46.8	268	46.4		28.4	109		50	20		43	6	10	33	13	22	48		21	54	
15	43	21.7		46.3	283	16.3		33.3	109		49	30	5	56	25	6	50	12	57	46	2	46	56	
16	58	21.7		45.7	297	46.1		38.1	108		48	35	6	03	33	7	01		42	44	3	00	58	
17	73	21.7	+19	45.2	312	15.9	-26	42.8	108		47	40	6	10	6	43	7	12	12	24	43	3	17	60
18	88	21.6	+19	44.7	326	45.6	-26	47.3	107		45	45	6	18	6	54	7	26	12	03	42	3	38	61
19	103	21.6		44.1	341	15.3		51.8	107		45	50		26	7	06	42	11	37	38	4	03	65	
20	118	21.6		43.6	355	45.0	-26	56.0	107		42	52		30	12	50	24	37		16	66			
21	133	21.6		43.1	10	14.6	-27	00.2	106		42	54		34	18	7	59	11	09	35		30	69	
22	148	21.6		42.5	24	44.2		04.2	106		40	56		39	25	8	08	10	52	32	4	47	72	
23	163	21.6		42.0	39	13.8		08.1	106		39	58		43	33	19	32	28		5	07	76		
24	178	21.6	+19	41.5	53	43.3	-27	11.9	105		38	60 S	6	49	7	41	8	32	10	06	20	5	32	84
UT	ARIES PMG 3 ^h 52.4 ^m				VENUS Mag: -4.2 PMG: 15 ^h 01 ^m				MARTE Mag: +1.3 PMG: 8 ^h 59 ^m				JÚPITER Mag: -1.8 PMG: 12 ^h 22 ^m				SATURNO Mag: +0.7 PMG: 4 ^h 50 ^m							
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	301	44.1	134	44.1	+6	14.0	225	11.0	+22	50.9	174	04.2	+19	25.3	287	11.9	+3	30.8						
1	316	46.6	149	44.2		12.8	240	11.6		51.1	189	06.1		25.2	302	14.3		30.8						
2	331	49.0	164	44.2		11.6	255	12.2		51.3	204	08.0		25.0	317	16.8		30.8						
3	346	51.5	179	44.3		10.4	270	12.8		51.5	219	09.9		24.9	332	19.2		30.8						
4	1	54.0	194	44.3		09.2	285	13.4		51.7	234	11.8		24.8	347	21.7		30.8						
5	16	56.4	209	44.4	+6	07.9	300	14.1	+22	51.9	249	13.7	+19	24.6	2	24.1	+3	30.8						
6	31	58.9	224	44.5	+6	06.7	315	14.7	+22	52.1	264	15.6	+19	24.5	17	26.6	+3	30.8						
7	47	01.4	239	44.5		05.5	330	15.3		52.3	279	17.5		24.4	32	29.0		30.8						
8	62	03.8	254	44.6		04.3	345	15.9		52.5	294	19.4		24.2	47	31.5		30.8						
9	77	06.3	269	44.6		03.1	0	16.5		52.6	309	21.3		24.1	62	33.9		30.8						
10	92	08.8	284	44.7		01.9	15	17.1		52.8	324	23.2		24.0	77	36.4		30.7						
11	107	11.2	299	44.7	+6	00.7	30	17.8	+22	53.0	339	25.0	+19	23.8	92	38.8	+3	30.7						
12	122	13.7	314	44.8	+5	59.5	45	18.4	+22	53.2	354	26.9	+19	23.7	107	41.3	+3	30.7						
13	137	16.1	329	44.9		58.3	60	19.0		53.4	9	28.8		23.6	122	43.7		30.7						
14	152	18.6	344	44.9		57.1	75	19.6		53.6	24	30.7		23.4	137	46.2		30.7						
15	167	21.1	359	45.0		55.9	90	20.2		53.8	39	32.6		23.3	152	48.6		30.7						
16	182	23.5	14	45.0		54.7	105	20.8		53.9	54	34.5		23.2	167	51.1		30.7						
17	197	26.0	29	45.1	+5	53.5	120	21.5	+22	54.1	69	36.4	+19	23.1	182	53.5	+3	30.7						
18	212	28.5	44	45.2	+5	52.3	135	22.1	+22	54.3	84	38.3	+19	22.9	197	56.0	+3	30.7						
19	227	30.9	59	45.2		51.1	150	22.7		54.5	99	40.2		22.8	212	58.4		30.7						
20	242	33.4	74	45.3		49.9	165	23.3		54.7	114	42.1		22.7	228	00.9		30.7						
21	257	35.9	89	45.3		48.7	180	23.9		54.9	129	44.0		22.5	243	03.3		30.7						
22	272	38.3	104	45.4		47.5	195	24.5		55.0	144	45.9		22.4	258	05.8		30.7						
23	287	40.8	119	45.5		46.3	210	25.2		55.2	159	47.8		22.3	273	08.2		30.7						
24	302	43.3	134	45.5	+5	45.0	225	25.8	+22	55.4	174	49.7	+19	22.1	288	10.7	+3	30.6						
Dif	—		+1		-12		+6		+2		+19		-1		+25		0							

UT	SOL		LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG:12 ^h 06.6 ^m		Edad: 10.6 ^d SD: 14'7 PMG: 21 ^h 09 ^m		PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1 R°: 52 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	178	21.6	+19	41.5	53	43.3	104	-27	11.9	37	20 47	21 53	** **	19 35	48	22 40	63	
1	193	21.6		40.9	68	12.7	105		15.6	35	33	30	23 23	18 58	50	23 18	60	
2	208	21.6		40.4	82	42.2	105		19.1	34	21	21 12	22 34	32	51	23 44	59	
3	223	21.6		39.8	97	11.6	104		22.5	32	10	20 57	22 05	18 11	51	** ** *	**	
4	238	21.6		39.3	111	41.0	104		25.7	32	20 01	44	21 43	17 54	51	** ** *	**	
5	253	21.6	+19	38.8	126	10.3	103	-27	28.9	32	19 53	20 33	21 26	17 39	52	** ** *	**	
6	268	21.6	+19	38.2	140	39.7	104	-27	31.9	30	19 35	20 10	20 54	17 09	52	0 21	48	
7	283	21.6		37.7	155	08.9	102		34.7	28	21	19 52	30	16 46	52	0 44	48	
8	298	21.6		37.1	169	38.2	103		37.5	28	19 09	37	20 11	26	53	1 02	49	
9	313	21.6		36.6	184	07.4	102		40.1	26	18 58	24	19 56	16 10	53	18	50	
10	328	21.5		36.1	198	36.6	102		42.6	25	40	19 04	32	15 42	53	1 45	51	
11	343	21.5	+19	35.5	213	05.8	102	-27	44.9	23	18 25	18 47	19 13	15 18	53	2 08	52	
12	358	21.5	+19	35.0	227	35.0	102	-27	47.1	22	18 10	18 32	18 58	14 56	53	2 30	52	
13	13	21.5		34.4	242	04.1	101		49.2	21	17 56	18	44	34	53	2 51	54	
14	28	21.5		33.9	256	33.2	101		51.1	19	41	18 04	31	14 10	53	3 15	54	
15	43	21.5		33.4	271	02.3	101		52.9	18	23	17 49	18	13 43	52	42	55	
16	58	21.5		32.8	285	31.4	101		54.6	17	13	41	11	26	53	3 58	55	
17	73	21.5	+19	32.3	300	00.4	100	-27	56.1	15	17 02	17 31	18 04	13 07	53	4 17	55	
18	88	21.5	+19	31.7	314	29.5	101	-27	57.5	14	16 49	17 21	17 57	12 45	51	4 39	57	
19	103	21.5		31.2	328	58.5	100		58.8	13	33	09	48	15	52	5 08	57	
20	118	21.5		30.6	343	27.5	100	-27	59.9	11	25	17 03	45	12 01	51	22	58	
21	133	21.5		30.1	357	56.5	100	-28	00.9	10	16	16 57	41	11 44	51	39	58	
22	148	21.5		29.5	12	25.5	99		01.8	9	16 07	50	36	24	50	5 59	59	
23	163	21.5		29.0	26	54.4	99		02.5	7	15 56	42	32	11 00	49	6 23	61	
24	178	21.5	+19	28.4	41	23.4	100	-28	03.1	6	15 44	16 34	17 27	10 26	47	6 56	64	
UT	ARIES PMG 3 ^h 48.5 ^m		VENUS Mag: -4.2 PMG: 15 ^h 01 ^m		MARTE Mag: +1.3 PMG: 8 ^h 58 ^m		JÚPITER Mag: -1.8 PMG: 12 ^h 19 ^m		SATURNO Mag: +0.7 PMG: 4 ^h 47 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	302	43.3	134	45.5	+5	45.0	225	25.8	+22	55.4	174	49.7	+19	22.1	288	10.7	+3	30.6
1	317	45.7	149	45.6		43.8	240	26.4		55.6	189	51.6		22.0	303	13.1		30.6
2	332	48.2	164	45.7		42.6	255	27.0		55.8	204	53.5		21.9	318	15.6		30.6
3	347	50.6	179	45.7		41.4	270	27.6		56.0	219	55.4		21.7	333	18.0		30.6
4	2	53.1	194	45.8		40.2	285	28.3		56.1	234	57.3		21.6	348	20.5		30.6
5	17	55.6	209	45.9	+5	39.0	300	28.9	+22	56.3	249	59.1	+19	21.5	3	22.9	+3	30.6
6	32	58.0	224	45.9	+5	37.8	315	29.5	+22	56.5	265	01.0	+19	21.3	18	25.4	+3	30.6
7	48	00.5	239	46.0		36.6	330	30.1		56.7	280	02.9		21.2	33	27.8		30.6
8	63	03.0	254	46.1		35.4	345	30.7		56.9	295	04.8		21.1	48	30.3		30.6
9	78	05.4	269	46.2		34.2	0	31.3		57.0	310	06.7		20.9	63	32.8		30.6
10	93	07.9	284	46.2		33.0	15	32.0		57.2	325	08.6		20.8	78	35.2		30.6
11	108	10.4	299	46.3	+5	31.8	30	32.6	+22	57.4	340	10.5	+19	20.7	93	37.7	+3	30.6
12	123	12.8	314	46.4	+5	30.6	45	33.2	+22	57.6	355	12.4	+19	20.5	108	40.1	+3	30.6
13	138	15.3	329	46.4		29.3	60	33.8		57.8	10	14.3		20.4	123	42.6		30.5
14	153	17.8	344	46.5		28.1	75	34.4		57.9	25	16.2		20.3	138	45.0		30.5
15	168	20.2	359	46.6		26.9	90	35.1		58.1	40	18.1		20.1	153	47.5		30.5
16	183	22.7	14	46.7		25.7	105	35.7		58.3	55	20.0		20.0	168	49.9		30.5
17	198	25.1	29	46.7	+5	24.5	120	36.3	+22	58.5	70	21.9	+19	19.9	183	52.4	+3	30.5
18	213	27.6	44	46.8	+5	23.3	135	36.9	+22	58.6	85	23.8	+19	19.7	198	54.8	+3	30.5
19	228	30.1	59	46.9		22.1	150	37.5		58.8	100	25.7		19.6	213	57.3		30.5
20	243	32.5	74	47.0		20.9	165	38.2		59.0	115	27.6		19.5	228	59.8		30.5
21	258	35.0	89	47.1		19.7	180	38.8		59.2	130	29.5		19.3	244	02.2		30.5
22	273	37.5	104	47.1		18.5	195	39.4		59.3	145	31.4		19.2	259	04.7		30.5
23	288	39.9	119	47.2		17.2	210	40.0		59.5	160	33.3		19.1	274	07.1		30.5
24	303	42.4	134	47.3	+5	16.0	225	40.6	+22	59.7	175	35.1	+19	19.0	289	09.6	+3	30.4
Dif	—		+1		-12		+6		+2		+19		-1		+25		0	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 15'7 PMG:12 ^h 06.6 ^m				Edad: 11.6 ^d SD: 14'7 PMG: 22 ^h 00 ^m							PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1 R°: 51 ^m											
	hG ☉	Dec			hG ☾	Dif	Dec	Dif				Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°		°	h	m	h	m	h	m	m	h	m	m		
0	178	21.5	+19	28.4	41	23.4	99	-28	03.1	5	60 N	**	**	2	21	3	27	20	22	20	23	42	85
1	193	21.5		27.9	55	52.3	99		03.6	3	58	0	50	2	44	41	19	47	28	**	**	**	
2	208	21.5		27.3	70	21.2	99		03.9	2	56	1	40	3	02	3	53		21	33	**	**	**
3	223	21.5		26.8	84	50.2	100		04.1	0	54	2	09	17		4	03	19	01	36	0	05	57
4	238	21.5		26.2	99	19.1	99		04.1	0	52		30	30		13	18	44	38		22	56	
5	253	21.5	+19	25.7	113	48.0	99	-28	04.0	1	50	2	47	3	41	4	21	18	29	40	0	37	56
6	268	21.5	+19	25.1	128	16.9	99	-28	03.8	2	45	3	20	4	04	4	39	18	00	42	1	07	55
7	283	21.5		24.6	142	45.8	99		03.4	4	40	3	44	22		4	53	17	37	44	31	54	
8	298	21.5		24.0	157	14.7	99		03.0	4	35	4	02	37		5	05		18	45	1	50	54
9	313	21.5		23.5	171	43.6	99		02.3	7	30		17	4	49	15	17	01	47		2	07	53
10	328	21.5		22.9	186	12.5	99		01.5	8	20	4	41	5	10	33	16	34	48		35	52	
11	343	21.5	+19	22.4	200	41.4	99	-28	00.6	9	10 N	5	00	5	26	5	49	16	10	50	2	59	52
12	358	21.5	+19	21.8	215	10.3	99	-27	59.6	10	0	5	16	5	41	6	03	15	48	51	3	21	51
13	13	21.5		21.2	229	39.2	99		58.4	12	10 S		29	5	55	17		25	53		3	43	51
14	28	21.5		20.7	244	08.1	99		57.1	13	20		42	6	09	32		15	02	53	4	07	50
15	43	21.5		20.1	258	37.0	99		55.7	14	30	5	55	24		49		14	34	55	35	49	
16	58	21.5		19.6	273	05.9	99		54.1	16	35	6	01	32		6	59	14	17	57	4	52	48
17	73	21.5	+19	19.0	287	34.9	100	-27	52.4	17	40	6	08	6	41	7	11	13	58	58	5	11	48
18	88	21.5	+19	18.4	302	03.8	99	-27	50.5	19	45	6	16	6	52	7	24	13	35	59	5	34	47
19	103	21.5		17.9	316	32.8	100		48.5	20	50		24	7	04	40		13	05	61	6	04	45
20	118	21.6		17.3	331	01.7	99		46.4	21	52		28		09	47		12	51	62	19	44	
21	133	21.6		16.8	345	30.7	100		44.1	23	54		32	16		7	56		34	63	36	42	
22	148	21.6		16.2	359	59.7	100		41.7	24	56		36	22		8	05	12	13	66	6	56	41
23	163	21.6		15.6	14	28.7	100		39.2	25	58		41	30		16		11	47	69	7	22	38
24	178	21.6	+19	15.1	28	57.7	100	-27	36.5	27	60 S	6	46	7	38	8	28	11	11	75	7	58	32

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO												
	PMG: 3 ^h 44.6 ^m		Mag: -4.2 PMG: 15 ^h 01 ^m			Mag: +1.3 PMG: 8 ^h 57 ^m			Mag: -1.8 PMG: 12 ^h 16 ^m			Mag: +0.7 PMG: 4 ^h 43 ^m												
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec											
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'										
0	303	42.4	134	47.3	+5	16.0	225	40.6	+22	59.7	175	35.1	+19	19.0	289	09.6	+3	30.4						
1	318	44.9	149	47.4		14.8	240	41.2	+22	59.9	190	37.0		18.8	304	12.0		30.4						
2	333	47.3	164	47.5		13.6	255	41.9	+23	00.0	205	38.9		18.7	319	14.5		30.4						
3	348	49.8	179	47.5		12.4	270	42.5	+23	00.2	220	40.8		18.6	334	17.0		30.4						
4	3	52.2	194	47.6		11.2	285	43.1		00.4	235	42.7		18.4	349	19.4		30.4						
5	18	54.7	209	47.7	+5	10.0	300	43.7	+23	00.6	250	44.6	+19	18.3	4	21.9	+3	30.4						
6	33	57.2	224	47.8	+5	08.8	315	44.3	+23	00.7	265	46.5	+19	18.2	19	24.3	+3	30.4						
7	48	59.6	239	47.9		07.6	330	45.0		00.9	280	48.4		18.0	34	26.8		30.4						
8	64	02.1	254	47.9		06.3	345	45.6		01.1	295	50.3		17.9	49	29.2		30.4						
9	79	04.6	269	48.0		05.1	0	46.2		01.2	310	52.2		17.8	64	31.7		30.4						
10	94	07.0	284	48.1		03.9	15	46.8		01.4	325	54.1		17.6	79	34.2		30.3						
11	109	09.5	299	48.2	+5	02.7	30	47.4	+23	01.6	340	56.0	+19	17.5	94	36.6	+3	30.3						
12	124	12.0	314	48.3	+5	01.5	45	48.1	+23	01.7	355	57.9	+19	17.4	109	39.1	+3	30.3						
13	139	14.4	329	48.4	+5	00.3	60	48.7		01.9	10	59.8		17.2	124	41.5		30.3						
14	154	16.9	344	48.5	+4	59.1	75	49.3		02.1	26	01.7		17.1	139	44.0		30.3						
15	169	19.4	359	48.6		57.9	90	49.9		02.3	41	03.6		17.0	154	46.4		30.3						
16	184	21.8	14	48.6		56.6	105	50.5		02.4	56	05.5		16.8	169	48.9		30.3						
17	199	24.3	29	48.7	+4	55.4	120	51.2	+23	02.6	71	07.4	+19	16.7	184	51.4	+3	30.3						
18	214	26.7	44	48.8	+4	54.2	135	51.8	+23	02.8	86	09.2	+19	16.6	199	53.8	+3	30.3						
19	229	29.2	59	48.9		53.0	150	52.4		02.9	101	11.1		16.4	214	56.3		30.3						
20	244	31.7	74	49.0		51.8	165	53.0		03.1	116	13.0		16.3	229	58.7		30.2						
21	259	34.1	89	49.1		50.6	180	53.6		03.3	131	14.9		16.2	245	01.2		30.2						
22	274	36.6	104	49.2		49.4	195	54.3		03.4	146	16.8		16.0	260	03.7		30.2						
23	289	39.1	119	49.3		48.1	210	54.9		03.6	161	18.7		15.9	275	06.1		30.2						
24	304	41.5	134	49.4	+4	46.9	225	55.5	+23	03.8	176	20.6	+19	15.8	290	08.6	+3	30.2						
Dif	—		+1			-12	+6			+2			+19			-1			+25			0		

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15'7 PMG:12 ^h 06.6 ^m				Edad: 12.6 ^d SD: 14'8 PMG: 22 ^h 51 ^m PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3 R°: 51 ^m																
	hG ☉	Dec			hG ☾	Dif			Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	178	21.6	+19	15.1	28	57.7		-27	36.5	28	60 N	20 42	21 47	** **	20 42	10	** **	** **			
1	193	21.6		14.5	43	26.8	101		33.7	29	58	29	25	23 08	20 15	17	0	16	79		
2	208	21.6		14.0	57	55.8	100		30.8	31	56	17	21 07	22 26	19 54	22	0	41	74		
3	223	21.6		13.4	72	24.9	101		27.7	32	54	20 07	20 53	21 59	37 25	1	02	71			
4	238	21.6		12.8	86	54.0	101		24.5	34	52	19 58	40	39	22 28	18 69					
5	253	21.6	+19	12.3	101	23.2	102	-27	21.1	34	50	19 50	20 29	21 22	19 09	31	1	33	67		
6	268	21.6	+19	11.7	115	52.3	101	-27	17.7	36	45	19 33	20 07	20 51	18 42	35	2	02	64		
7	283	21.6		11.1	130	21.5	102		14.1	38	40	19	19 50	28	21 38	25 61					
8	298	21.6		10.6	144	50.7	102		10.3	38	35	19 07	35	20 09	18 03	41	2	44	59		
9	313	21.6		10.0	159	19.9	102		06.5	40	30	18 57	23	19 54	17 48	43	3	00	58		
10	328	21.6		09.4	173	49.1	102	-27	02.5	42	20	39	19 03	31	22 46	27 56					
11	343	21.7	+19	08.9	188	18.4	103	-26	58.3	42	10 N	18 24	18 46	19 13	17 00	48	3	51	53		
12	358	21.7	+19	08.3	202	47.7	103	-26	54.1	42	0	18 10	18 32	18 57	16 39	51	4	12	52		
13	13	21.7		07.7	217	17.1	104		49.7	44	10 S	17 56	18	44	16 18	53	34	50			
14	28	21.7		07.1	231	46.4	103		45.1	46	20	41	18 05	31	15 55	56	4	57	48		
15	43	21.7		06.6	246	15.8	104		40.5	46	30	25	17 50	19	29 59	5 24	46				
16	58	21.7		06.0	260	45.3	105		35.7	48	35	15	42	13	15 14	61	40	44			
17	73	21.7	+19	05.4	275	14.7	104	-26	30.8	49	40	17 04	17 33	18 06	14 56	63	5	59	41		
18	88	21.7	+19	04.9	289	44.2	105	-26	25.7	51	45	16 51	17 23	17 59	14 34	66	6	21	39		
19	103	21.7		04.3	304	13.8	106		20.6	53	50	35	11	50	14 06	71	6	49	35		
20	118	21.7		03.7	318	43.3	105		15.3	53	52	28	05	47	13 53	72	7	03	33		
21	133	21.8		03.1	333	12.9	106		09.9	54	54	19	17 00	43	37 75	18 32					
22	148	21.8		02.6	347	42.6	107	-26	04.3	56	56	10	16 53	39	13 19	78	7	37	28		
23	163	21.8		02.0	2	12.3	107	-25	58.6	57	58	16 00	46	35	12 56	84	8	00	23		
24	178	21.8	+19	01.4	16	42.0	107	-25	52.8	58	60 S	15 48	16 38	17 30	12 26	92	8	30	15		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 3 ^h 40.6 ^m		Mag: -4.3 PMG: 15 ^h 01 ^m		Mag: +1.3 PMG: 8 ^h 56 ^m		Mag: -1.8 PMG: 12 ^h 13 ^m		Mag: +0.7 PMG: 4 ^h 39 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	304	41.5	134	49.4	+4	46.9	225	55.5	+23	03.8	176	20.6	+19	15.8	290	08.6	+3	30.2
1	319	44.0	149	49.5		45.7	240	56.1		03.9	191	22.5		15.6	305	11.0		30.2
2	334	46.5	164	49.6		44.5	255	56.7		04.1	206	24.4		15.5	320	13.5		30.2
3	349	48.9	179	49.7		43.3	270	57.4		04.2	221	26.3		15.4	335	16.0		30.2
4	4	51.4	194	49.8		42.1	285	58.0		04.4	236	28.2		15.2	350	18.4		30.2
5	19	53.9	209	49.9	+4	40.9	300	58.6	+23	04.6	251	30.1	+19	15.1	5	20.9	+3	30.1
6	34	56.3	224	50.0	+4	39.6	315	59.2	+23	04.7	266	32.0	+19	15.0	20	23.3	+3	30.1
7	49	58.8	239	50.1		38.4	330	59.8		04.9	281	33.9		14.8	35	25.8		30.1
8	65	01.2	254	50.2		37.2	346	00.5		05.1	296	35.8		14.7	50	28.3		30.1
9	80	03.7	269	50.3		36.0	1	01.1		05.2	311	37.7		14.6	65	30.7		30.1
10	95	06.2	284	50.4		34.8	16	01.7		05.4	326	39.6		14.4	80	33.2		30.1
11	110	08.6	299	50.5	+4	33.6	31	02.3	+23	05.5	341	41.5	+19	14.3	95	35.7	+3	30.1
12	125	11.1	314	50.6	+4	32.4	46	02.9	+23	05.7	356	43.4	+19	14.2	110	38.1	+3	30.1
13	140	13.6	329	50.7		31.1	61	03.6		05.9	11	45.3		14.0	125	40.6		30.0
14	155	16.0	344	50.8		29.9	76	04.2		06.0	26	47.1		13.9	140	43.0		30.0
15	170	18.5	359	50.9		28.7	91	04.8		06.2	41	49.0		13.8	155	45.5		30.0
16	185	21.0	14	51.0		27.5	106	05.4		06.3	56	50.9		13.6	170	48.0		30.0
17	200	23.4	29	51.1	+4	26.3	121	06.1	+23	06.5	71	52.8	+19	13.5	185	50.4	+3	30.0
18	215	25.9	44	51.2	+4	25.1	136	06.7	+23	06.7	86	54.7	+19	13.4	200	52.9	+3	30.0
19	230	28.4	59	51.3		23.8	151	07.3		06.8	101	56.6		13.2	215	55.4		30.0
20	245	30.8	74	51.4		22.6	166	07.9		07.0	116	58.5		13.1	230	57.8		30.0
21	260	33.3	89	51.5		21.4	181	08.5		07.1	132	00.4		13.0	246	00.3		30.0
22	275	35.7	104	51.6		20.2	196	09.2		07.3	147	02.3		12.8	261	02.8		29.9
23	290	38.2	119	51.7		19.0	211	09.8		07.5	162	04.2		12.7	276	05.2		29.9
24	305	40.7	134	51.8	+4	17.8	226	10.4	+23	07.6	177	06.1	+19	12.6	291	07.7	+3	29.9
Dif	—		+1	-12		+6	+2				+19	-1			+25	0		

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG:12 ^h 06.5 ^m				Edad: 13.6 ^d SD: 14'8 PMG: 23 ^h 40 ^m													
	PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 Rº: 47 ^m																	
	hG ☉	Dec			hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	°	h	m	h	m	h	m	m	
0	178	21.8	+19	01.4	16	42.0	-25	52.8	59	60 N	**	**	2	27	3	31	20 50 4	1 07 94
1	193	21.8		00.8	31	11.8		46.9	61	58	1	06	2	49		45	31 9	33 86
2	208	21.8	+19	00.3	45	41.6		40.8	61	56	1	48	3	06		3	56	15 13
3	223	21.8	+18	59.7	60	11.4		34.7	61	54	2	15	21	4	07	20	01 17	2 11 77
4	238	21.8		59.1	74	41.3		28.4	63	52		35		33		16	19 49 20	26 74
5	253	21.9	+18	58.5	89	11.2	-25	21.9	65	50	2	51	3	44	4	24	19 38 23	2 38 72
6	268	21.9	+18	58.0	103	41.2	-25	15.4	65	45	3	23	4	06	4	41	19 16 27	3 04 67
7	283	21.9		57.4	118	11.2		08.7	67	40	3	46		24	4	55	18 58 31	25 63
8	298	21.9		56.8	132	41.3	-25	01.9	68	35	4	04		38	5	06	43 34	42 61
9	313	21.9		56.2	147	11.4	-24	55.0	69	30		19	4	50		17	29 37	3 57 58
10	328	21.9		55.6	161	41.6		48.0	70	20	4	42	5	10		34	18 07 40	4 22 54
11	343	21.9	+18	55.1	176	11.8	-24	40.9	71	10 N	5	01	5	27	5	49	17 47 44	4 43 52
12	358	22.0	+18	54.5	190	42.0	-24	33.6	73	0	5	16	5	41	6	03	17 28 48	5 03 49
13	13	22.0		53.9	205	12.3		26.2	75	10 S		29		5	55	17	17 10 51	23 46
14	28	22.0		53.3	219	42.7		18.7	75	20		42	6	08		31	16 50 54	5 44 43
15	43	22.0		52.7	234	13.0		11.1	76	30	5	54		23		48	27 59	6 08 39
16	58	22.0		52.1	248	43.5	-24	03.4	77	35	6	00		31	6	58	16 13 62	22 37
17	73	22.0	+18	51.6	263	14.0	-23	55.5	79	40	6	07	6	40	7	09	15 58 64	6 39 34
18	88	22.0	+18	51.0	277	44.5	-23	47.6	79	45	6	14	6	50	7	22	15 39 68	6 59 30
19	103	22.1		50.4	292	15.1		39.5	81	50		22	7	01		37	15 73	7 23 26
20	118	22.1		49.8	306	45.7		31.3	82	52		26		07	44	15	04 75	35 23
21	133	22.1		49.2	321	16.4		23.0	83	54		29		13	7	53	14 51 78	7 48 21
22	148	22.1		48.6	335	47.2		14.6	84	56		33		19	8	02	36 82	8 04 16
23	163	22.1		48.0	350	18.0	-23	06.1	85	58		38		26	12		14 18 87	22 12
24	178	22.2	+18	47.4	4	48.8	-22	57.4	87	60 S	6	42	7	34	8	24	13 56 94	8 44 6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 3 ^h 36.7 ^m		Mag: -4.3 PMG: 15 ^h 00 ^m		Mag: +1.3 PMG: 8 ^h 55 ^m		Mag: -1.8 PMG: 12 ^h 10 ^m		Mag: +0.6 PMG: 4 ^h 35 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	305	40.7	134	51.8	+4	17.8	226	10.4	+23	07.6	177	06.1	+19	12.6	291	07.7	+3	29.9
1	320	43.1	149	51.9		16.5	241	11.0		07.8	192	08.0		12.4	306	10.1		29.9
2	335	45.6	164	52.0		15.3	256	11.7		07.9	207	09.9		12.3	321	12.6		29.9
3	350	48.1	179	52.1		14.1	271	12.3		08.1	222	11.8		12.2	336	15.1		29.9
4	5	50.5	194	52.2		12.9	286	12.9		08.2	237	13.7		12.0	351	17.5		29.9
5	20	53.0	209	52.4	+4	11.7	301	13.5	+23	08.4	252	15.6	+19	11.9	6	20.0	+3	29.9
6	35	55.5	224	52.5	+4	10.5	316	14.1	+23	08.5	267	17.5	+19	11.7	21	22.5	+3	29.8
7	50	57.9	239	52.6		09.2	331	14.8		08.7	282	19.4		11.6	36	24.9		29.8
8	66	00.4	254	52.7		08.0	346	15.4		08.8	297	21.3		11.5	51	27.4		29.8
9	81	02.9	269	52.8		06.8	1	16.0		09.0	312	23.2		11.3	66	29.9		29.8
10	96	05.3	284	52.9		05.6	16	16.6		09.2	327	25.1		11.2	81	32.3		29.8
11	111	07.8	299	53.0	+4	04.4	31	17.3	+23	09.3	342	26.9	+19	11.1	96	34.8	+3	29.8
12	126	10.2	314	53.2	+4	03.2	46	17.9	+23	09.5	357	28.8	+19	10.9	111	37.3	+3	29.8
13	141	12.7	329	53.3		01.9	61	18.5		09.6	12	30.7		10.8	126	39.7		29.7
14	156	15.2	344	53.4	+4	00.7	76	19.1		09.8	27	32.6		10.7	141	42.2		29.7
15	171	17.6	359	53.5	+3	59.5	91	19.7		09.9	42	34.5		10.5	156	44.7		29.7
16	186	20.1	14	53.6		58.3	106	20.4		10.1	57	36.4		10.4	171	47.1		29.7
17	201	22.6	29	53.7	+3	57.1	121	21.0	+23	10.2	72	38.3	+19	10.3	186	49.6	+3	29.7
18	216	25.0	44	53.9	+3	55.8	136	21.6	+23	10.4	87	40.2	+19	10.1	201	52.1	+3	29.7
19	231	27.5	59	54.0		54.6	151	22.2		10.5	102	42.1		10.0	216	54.5		29.7
20	246	30.0	74	54.1		53.4	166	22.9		10.7	117	44.0		09.9	231	57.0		29.6
21	261	32.4	89	54.2		52.2	181	23.5		10.8	132	45.9		09.7	246	59.5		29.6
22	276	34.9	104	54.3		51.0	196	24.1		11.0	147	47.8		09.6	262	01.9		29.6
23	291	37.3	119	54.5		49.7	211	24.7		11.1	162	49.7		09.5	277	04.4		29.6
24	306	39.8	134	54.6	+3	48.5	226	25.4	+23	11.3	177	51.6	+19	09.3	292	06.9	+3	29.6
Dif	—		+1		-12		+6		+2		+19		-1		+25		0	

UT	SOL		LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG:12 ^h 06.5 ^m		Edad: 14.6 ^d SD: 14'9 PMG: **h **m						Civil		Náutico		Hora R°		Hora R°	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			h m	h m	h m	h m	h m	m	h m	m
h	° /	° /	° /		° /		°	h m	h m	h m	h m	h m	m	h m	m	
0	178	22.2	+18 47.4	4	48.8	-22 57.4	60 N	20 38	21 40	** **	20 54	2	2 41	95		
1	193	22.2	46.9	19	19.7 ¹¹⁹	48.7 ⁸⁷	58	25	19	22 55	40	7	2 59	89		
2	208	22.2	46.3	33	50.7 ¹²⁰	39.9 ⁸⁸	56	13	21 03	22 18	28	11	3 15	84		
3	223	22.2	45.7	48	21.7 ¹²⁰	30.9 ⁹⁰	54	20 04	20 49	21 53	18	14	28	8		
4	238	22.2	45.1	62	52.7 ¹²⁰	21.9 ⁹⁰	52	19 55	37	34	09	17	40	77		
5	253	22.2	+18 44.5	77	23.8 ¹²¹	-22 12.7 ⁹²	50	19 47	20 26	21 18	20 01	19	3 50	75		
6	268	22.3	+18 43.9	91	55.0 ¹²²	-22 03.4 ⁹³	45	19 30	20 04	20 48	19 43	24	4 11	70		
7	283	22.3	43.3	106	26.2 ¹²²	-21 54.0 ⁹⁴	40	17	19 47	25	29	28	28	66		
8	298	22.3	42.7	120	57.4 ¹²²	44.6 ⁹⁴	35	19 05	33	20 07	17	31	43	63		
9	313	22.3	42.1	135	28.7 ¹²³	35.0 ⁹⁶	30	18 55	22	19 53	19 06	34	4 55	60		
10	328	22.4	41.5	150	00.1 ¹²⁴	25.3 ⁹⁷	20	38	19 02	30	18 47	39	5 16	56		
11	343	22.4	+18 40.9	164	31.5 ¹²⁴	-21 15.5 ⁹⁸	10 N	18 24	18 46	19 12	18 31	43	5 35	51		
12	358	22.4	+18 40.3	179	03.0 ¹²⁵	-21 05.6 ⁹⁹	0	18 10	18 32	18 57	18 16	47	5 52	48		
13	13	22.4	39.7	193	34.5 ¹²⁵	-20 55.6 ¹⁰⁰	10 S	17 56	19	44	18 01	51	6 09	44		
14	28	22.4	39.1	208	06.1 ¹²⁶	45.6 ¹⁰⁰	20	42	18 05	32	17 44	55	27	40		
15	43	22.5	38.6	222	37.7 ¹²⁶	35.4 ¹⁰²	30	26	17 51	20	26	59	47	36		
16	58	22.5	38.0	237	09.4 ¹²⁷	25.1 ¹⁰³	35	16	43	14	15	62	6 59	33		
17	73	22.5	+18 37.4	251	41.1 ¹²⁷	-20 14.7 ¹⁰⁴	40	17 06	17 35	18 07	17 02	66	7 13	30		
18	88	22.5	+18 36.8	266	12.9 ¹²⁸	-20 04.3 ¹⁰⁴	45	16 53	17 25	18 00	16 47	70	7 29	26		
19	103	22.6	36.2	280	44.7 ¹²⁸	-19 53.7 ¹⁰⁶	50	38	13	17 53	28	76	49	21		
20	118	22.6	35.6	295	16.6 ¹²⁹	43.1 ¹⁰⁶	52	31	08	49	19	78	7 58	19		
21	133	22.6	35.0	309	48.5 ¹²⁹	32.3 ¹⁰⁸	54	23	17 02	46	16 09	82	8 09	16		
22	148	22.6	34.4	324	20.5 ¹³⁰	21.5 ¹⁰⁸	56	14	16 56	42	15 58	85	20	13		
23	163	22.6	33.8	338	52.5 ¹³⁰	-19 10.5 ¹¹⁰	58	16 04	49	38	45	89	34	9		
24	178	22.7	+18 33.2	353	24.6 ¹³¹	-18 59.5 ¹¹⁰	60 S	15 52	16 41	17 33	15 30	94	8 50	4		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 3 ^h 32.8 ^m		Mag: -4.3 PMG: 15 ^h 00 ^m		Mag: +1.3 PMG: 8 ^h 54 ^m		Mag: -1.8 PMG: 12 ^h 07 ^m		Mag: +0.6 PMG: 4 ^h 31 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	° /		° /		° /		° /		° /					
0	306	39.8	134	54.6	+3 48.5	226	25.4	+23 11.3	177	51.6	+19 09.3	292	06.9	+3 29.6
1	321	42.3	149	54.7	47.3	241	26.0	11.4	192	53.5	09.2	307	09.3	29.6
2	336	44.7	164	54.8	46.1	256	26.6	11.6	207	55.4	09.1	322	11.8	29.6
3	351	47.2	179	54.9	44.9	271	27.2	11.7	222	57.3	08.9	337	14.3	29.6
4	6	49.7	194	55.1	43.6	286	27.8	11.8	237	59.2	08.8	352	16.7	29.5
5	21	52.1	209	55.2	+3 42.4	301	28.5	+23 12.0	253	01.1	+19 08.7	7	19.2	+3 29.5
6	36	54.6	224	55.3	+3 41.2	316	29.1	+23 12.1	268	03.0	+19 08.5	22	21.7	+3 29.5
7	51	57.1	239	55.4	40.0	331	29.7	12.3	283	04.9	08.4	37	24.2	29.5
8	66	59.5	254	55.6	38.8	346	30.3	12.4	298	06.8	08.3	52	26.6	29.5
9	82	02.0	269	55.7	37.5	1	31.0	12.6	313	08.6	08.1	67	29.1	29.5
10	97	04.5	284	55.8	36.3	16	31.6	12.7	328	10.5	08.0	82	31.6	29.4
11	112	06.9	299	56.0	+3 35.1	31	32.2	+23 12.9	343	12.4	+19 07.9	97	34.0	+3 29.4
12	127	09.4	314	56.1	+3 33.9	46	32.8	+23 13.0	358	14.3	+19 07.7	112	36.5	+3 29.4
13	142	11.8	329	56.2	32.7	61	33.5	13.1	13	16.2	07.6	127	39.0	29.4
14	157	14.3	344	56.3	31.4	76	34.1	13.3	28	18.1	07.5	142	41.4	29.4
15	172	16.8	359	56.5	30.2	91	34.7	13.4	43	20.0	07.3	157	43.9	29.4
16	187	19.2	14	56.6	29.0	106	35.3	13.6	58	21.9	07.2	172	46.4	29.4
17	202	21.7	29	56.7	+3 27.8	121	36.0	+23 13.7	73	23.8	+19 07.1	187	48.9	+3 29.3
18	217	24.2	44	56.9	+3 26.6	136	36.6	+23 13.9	88	25.7	+19 06.9	202	51.3	+3 29.3
19	232	26.6	59	57.0	25.3	151	37.2	14.0	103	27.6	06.8	217	53.8	29.3
20	247	29.1	74	57.1	24.1	166	37.8	14.1	118	29.5	06.6	232	56.3	29.3
21	262	31.6	89	57.3	22.9	181	38.5	14.3	133	31.4	06.5	247	58.7	29.3
22	277	34.0	104	57.4	21.7	196	39.1	14.4	148	33.3	06.4	263	01.2	29.3
23	292	36.5	119	57.5	20.5	211	39.7	14.6	163	35.2	06.2	278	03.7	29.2
24	307	39.0	134	57.7	+3 19.2	226	40.3	+23 14.7	178	37.1	+19 06.1	293	06.2	+3 29.2
Dif	—		+1	-12		+6	+1		+19		-1		+25	

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 06.5 ^m			Edad: 15.6 ^d PHE { 4 ^h : 55 ¹ / ₁ 12 ^h : 55 ² / ₂ 20 ^h : 55 ⁴ / ₄ PMG: 0 ^h 27 ^m R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	178	22.7	+18	353	24.6	-18	59.5	60 N	**	**	2	34	3	36	20	55	0	4
1	193	22.7		7	56.8		132	58	1	19	2	54	3	49	46	4	27	87
2	208	22.7		22	28.9		131	56	1	55	3	11	4	00	38	7	38	83
3	223	22.7		37	01.2		133	54	2	20		25	10		31	10	48	79
4	238	22.8		51	33.5		133	52		40		37	19		24	13	4	56
5	253	22.8	+18	66	05.8	-18	03.1	50	2	55	3	47	4	26	20	18	15	5
6	268	22.8	+18	80	38.2	-17	51.6	45	3	26	4	09	4	43	20	06	20	5
7	283	22.9		95	10.6		134	40	3	48	26	4	56	19	55	24	33	65
8	298	22.9		109	43.1		135	35	4	06	40	5	08		47	27	44	61
9	313	22.9		124	15.6		135	30		20	4	52	18		39	30	5	54
10	328	22.9		138	48.2	-17	04.6	20	4	43	5	11	35		25	35	6	10
11	343	23.0	+18	153	20.8	-16	52.6	10 N	5	01	5	27	5	49	19	13	40	6
12	358	23.0	+18	167	53.4	-16	40.6	0	5	16	5	41	6	03	19	02	43	6
13	13	23.0		182	26.1		121	10 S		29	5	54	16		18	50	48	6
14	28	23.0		196	58.9		122	20		41	6	07	31		38	53	7	06
15	43	23.1		211	31.7	-16	04.0	30		53	22	47	24		24	58	22	31
16	58	23.1		226	04.5	-15	51.7	35	5	59	29		6	56	16	61	31	28
17	73	23.1	+18	240	37.4	-15	39.3	40	6	05	6	38	7	07	18	07	64	7
18	88	23.2	+18	255	10.3	-15	26.8	45	6	12	6	48	7	19	17	56	68	7
19	103	23.2		269	43.3		125	50		20	6	59	34		42	74	8	09
20	118	23.2		284	16.3	-15	01.6	52		23	7	04	41		36	76	16	13
21	133	23.2		298	49.3	-14	48.9	54		26		10	49		29	79	23	11
22	148	23.3		313	22.4		127	56		30		16	7	58	21	83	32	8
23	163	23.3		327	55.5		129	58		34		23	8	08	13	86	41	5
24	178	23.3	+18	342	28.7	-14	10.4	60 S	6	39	7	30	8	19	17	03	90	8

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 28.8 ^m		Mag: -4.3 PMG: 15 ^h 00 ^m		Mag: +1.3 PMG: 8 ^h 53 ^m		Mag: -1.8 PMG: 12 ^h 04 ^m		Mag: +0.6 PMG: 4 ^h 27 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	307	39.0	134	57.7	+3	19.2	178	37.1	+19	06.1
1	322	41.4	149	57.8		18.0	193	39.0		06.0
2	337	43.9	164	58.0		16.8	208	40.9		05.8
3	352	46.3	179	58.1		15.6	223	42.8		05.7
4	7	48.8	194	58.2		14.4	238	44.7		05.6
5	22	51.3	209	58.4	+3	13.1	253	46.6	+19	05.4
6	37	53.7	224	58.5	+3	11.9	268	48.5	+19	05.3
7	52	56.2	239	58.6		10.7	283	50.4		05.2
8	67	58.7	254	58.8		09.5	298	52.3		05.0
9	83	01.1	269	58.9		08.2	313	54.2		04.9
10	98	03.6	284	59.1		07.0	328	56.1		04.7
11	113	06.1	299	59.2	+3	05.8	343	58.0	+19	04.6
12	128	08.5	314	59.4	+3	04.6	358	59.9	+19	04.5
13	143	11.0	329	59.5		03.4	14	01.7		04.3
14	158	13.5	344	59.6		02.1	29	03.6		04.2
15	173	15.9	359	59.8	+3	00.9	44	05.5		04.1
16	188	18.4	14	59.9	+2	59.7	59	07.4		03.9
17	203	20.8	30	00.1	+2	58.5	74	09.3	+19	03.8
18	218	23.3	45	00.2	+2	57.2	89	11.2	+19	03.7
19	233	25.8	60	00.4		56.0	104	13.1		03.5
20	248	28.2	75	00.5		54.8	119	15.0		03.4
21	263	30.7	90	00.7		53.6	134	16.9		03.2
22	278	33.2	105	00.8		52.4	149	18.8		03.1
23	293	35.6	120	01.0		51.1	164	20.7		03.0
24	308	38.1	135	01.1	+2	49.9	179	22.6	+19	02.8
Dif	—		+1	-12		+6	+1	+19		-1
										+25

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG:12 ^h 06.4 ^m				Edad: 16.6 ^d SD: 15'1 PMG: 1 ^h 12 ^m PHE { 4 ^h : 55'5 12 ^h : 55'7 20 ^h : 55'8 Rº: 45 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico			Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	23.3	+18	18.6	342	28.7	-14	10.4	60 N	20 33	21 33	** **	20 55	1	5 46	91		
1	193	23.4		18.0	357	01.9	-13	57.4	58	20	21 14	22 43	50	4	5 54	87		
2	208	23.4		17.3	11	35.1		44.4	56	10	20 58	22 11	45	7	6 01	83		
3	223	23.4		16.7	26	08.4		31.3	54	20 00	45	21 47	41	10	07	81		
4	238	23.5		16.1	40	41.7		18.1	52	19 52	33	29	37	12	13	77		
5	253	23.5	+18	15.5	55	15.0	-13	04.9	50	19 44	20 23	21 14	20 33	15	6 18	75		
6	268	23.5	+18	14.9	69	48.4	-12	51.6	45	19 28	20 02	20 44	20 26	19	6 29	70		
7	283	23.6		14.3	84	21.8		38.2	40	15	19 45	23	19	24	38	65		
8	298	23.6		13.6	98	55.3		24.8	35	19 04	32	20 05	14	26	45	63		
9	313	23.6		13.0	113	28.7	-12	11.3	30	18 54	20	19 51	09	30	6 52	59		
10	328	23.7		12.4	128	02.2	-11	57.8	20	38	19 01	29	20 00	35	7 03	54		
11	343	23.7	+18	11.8	142	35.8	-11	44.2	10 N	18 23	18 45	19 11	19 53	39	7 13	49		
12	358	23.7	+18	11.2	157	09.3	-11	30.5	0	18 10	18 32	18 57	19 45	45	7 23	44		
13	13	23.8		10.5	171	42.9		16.8	10 S	17 57	19	44	38	49	32	40		
14	28	23.8		09.9	186	16.6	-11	03.0	20	43	18 06	33	31	53	42	36		
15	43	23.8		09.3	200	50.2	-10	49.2	30	27	17 52	21	22	59	53	30		
16	58	23.9		08.7	215	23.9		35.3	35	18	45	15	17	62	7 59	28		
17	73	23.9	+18	08.1	229	57.6	-10	21.4	40	17 07	17 36	18 09	19 11	66	8 06	24		
18	88	23.9	+18	07.4	244	31.3	-10	07.4	45	16 55	17 27	18 02	19 04	70	8 15	20		
19	103	24.0		06.8	259	05.0	-9	53.4	50	40	16	17 55	18 56	76	25	15		
20	118	24.0		06.2	273	38.8		39.3	52	33	11	52	52	78	29	13		
21	133	24.1		05.6	288	12.6		25.2	54	26	17 05	48	48	81	34	11		
22	148	24.1		04.9	302	46.4	-9	11.0	56	17	16 59	45	44	83	40	8		
23	163	24.1		04.3	317	20.3	-8	56.8	58	16 08	53	41	39	86	46	5		
24	178	24.2	+18	03.7	331	54.1	-8	42.5	60 S	15 56	16 45	17 37	18 33	90	8 53	1		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 24.9 ^m		Mag: -4.3 PMG: 15 ^h 00 ^m		Mag: +1.3 PMG: 8 ^h 52 ^m		Mag: -1.8 PMG: 12 ^h 01 ^m		Mag: +0.6 PMG: 4 ^h 23 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	308	38.1	135	01.1	+2	49.9	179	22.6	+19	02.8
1	323	40.6	150	01.3		48.7	194	24.5		02.7
2	338	43.0	165	01.4		47.5	209	26.4		02.6
3	353	45.5	180	01.6		46.2	224	28.3		02.4
4	8	47.9	195	01.7		45.0	239	30.2		02.3
5	23	50.4	210	01.9	+2	43.8	254	32.1	+19	02.2
6	38	52.9	225	02.0	+2	42.6	269	34.0	+19	02.0
7	53	55.3	240	02.2		41.3	284	35.9		01.9
8	68	57.8	255	02.3		40.1	299	37.8		01.8
9	84	00.3	270	02.5		38.9	314	39.7		01.6
10	99	02.7	285	02.6		37.7	329	41.6		01.5
11	114	05.2	300	02.8	+2	36.5	344	43.5	+19	01.3
12	129	07.7	315	03.0	+2	35.2	359	45.4	+19	01.2
13	144	10.1	330	03.1		34.0	14	47.3		01.1
14	159	12.6	345	03.3		32.8	29	49.2		00.9
15	174	15.1	0	03.4		31.6	44	51.1		00.8
16	189	17.5	15	03.6		30.3	59	53.0		00.7
17	204	20.0	30	03.8	+2	29.1	74	54.8	+19	00.5
18	219	22.4	45	03.9	+2	27.9	89	56.7	+19	00.4
19	234	24.9	60	04.1		26.7	104	58.6		00.3
20	249	27.4	75	04.2		25.4	120	00.5	+19	00.1
21	264	29.8	90	04.4		24.2	135	02.4	+19	00.0
22	279	32.3	105	04.6		23.0	150	04.3	+18	59.8
23	294	34.8	120	04.7		21.8	165	06.2		59.7
24	309	37.2	135	04.9	+2	20.5	180	08.1	+18	59.6
Dif	—		+2	-12		+6	+19	-1		+25

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 06.4 ^m				Edad: 17.6 ^d PHE { 4 ^h : 56'0 12 ^h : 56'1 20 ^h : 56'3 R°: 43 ^m PMG: 1 ^h 56 ^m																
	hG ☉		Dec		hG ☾		Dif		Dec				Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	178	24.2	+18	03.7	331	54.1			-8	42.5	60 N	**	**	2 40	3 41	20 55	**	7 15	89		
1	193	24.2		03.1	346	28.0	149			28.2	58	1 30	2 59	3 53	53	2	19	85			
2	208	24.2		02.4	1	01.9	149		-8	13.9	56	2 03	3 15	4 04	51	6	23	82			
3	223	24.3		01.8	15	35.8	149		-7	59.5	54	26	29	13	49	9	26	79			
4	238	24.3		01.2	30	09.7	149			45.0	52	44	40	22	48	10	29	76			
5	253	24.4	+18	00.5	44	43.6	149		-7	30.5	50	2 59	3 51	4 29	20 46	13	7 32	74			
6	268	24.4	+17	59.9	59	17.6	150		-7	16.0	45	3 29	4 11	4 45	20 44	17	7 37	69			
7	283	24.4		59.3	73	51.5	149		-7	01.5	40	3 51	28	4 58	41 22	42	65				
8	298	24.5		58.7	88	25.5	150		-6	46.9	35	4 08	42	5 09	39 25	46	61				
9	313	24.5		58.0	102	59.5	150			32.2	30	22	4 53	19	37 28	50	57				
10	328	24.5		57.4	117	33.4	149			17.5	20	4 44	5 12	35	34 34	7 56	52				
11	343	24.6	+17	56.8	132	07.4	150		-6	02.8	10 N	5 01	5 27	5 50	20 31	39	8 01	47			
12	358	24.6	+17	56.1	146	41.4	150		-5	48.1	0	5 16	5 41	6 03	20 28	43	8 06	43			
13	13	24.7		55.5	161	15.4	150			33.3	10 S	28	5 54	16	26 47	11	38				
14	28	24.7		54.9	175	49.5	151			18.5	20	40	6 07	30	23 52	16	34				
15	43	24.8		54.2	190	23.5	150		-5	03.6	30	52	20	45	20 58	22	28				
16	58	24.8		53.6	204	57.5	150		-4	48.8	35	5 57	28	6 55	18 61	25	25				
17	73	24.8	+17	53.0	219	31.5	150		-4	33.9	40	6 03	6 36	7 05	20 16	65	8 29	22			
18	88	24.9	+17	52.3	234	05.5	150		-4	18.9	45	6 10	6 45	7 17	20 13	70	8 33	18			
19	103	24.9		51.7	248	39.6	151		-4	04.0	50	17	6 56	32	10 75	39	12				
20	118	25.0		51.1	263	13.6	150		-3	49.0	52	20	7 01	38	09 77	41	11				
21	133	25.0		50.4	277	47.6	150			34.0	54	24	07	46	07 80	43	9				
22	148	25.0		49.8	292	21.6	150			18.9	56	27	13	7 54	06 82	46	6				
23	163	25.1		49.1	306	55.6	150		-3	03.9	58	31	19	8 04	04 85	49	3				
24	178	25.1	+17	48.5	321	29.6	150		-2	48.8	60 S	6 35	7 26	8 15	20 02	89	8 53	**			
UT	ARIES			VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 3 ^h 21.0 ^m			Mag: -4.3 PMG: 15 ^h 00 ^m				Mag: +1.3 PMG: 8 ^h 51 ^m				Mag: -1.8 PMG: 11 ^h 58 ^m				Mag: +0.6 PMG: 4 ^h 19 ^m					
	hG ♈		Dec		hG ♊		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	309	37.2	135	04.9	+2	20.5	227	10.4	+23	21.0	180	08.1	+18	59.6	295	05.0	+3	28.4			
1	324	39.7	150	05.0		19.3	242	11.1		21.1	195	10.0		59.4	310	07.5		28.4			
2	339	42.2	165	05.2		18.1	257	11.7		21.2	210	11.9		59.3	325	10.0		28.4			
3	354	44.6	180	05.4		16.9	272	12.3		21.3	225	13.8		59.2	340	12.5		28.3			
4	9	47.1	195	05.5		15.6	287	12.9		21.5	240	15.7		59.0	355	14.9		28.3			
5	24	49.6	210	05.7	+2	14.4	302	13.6	+23	21.6	255	17.6	+18	58.9	10	17.4	+3	28.3			
6	39	52.0	225	05.9	+2	13.2	317	14.2	+23	21.7	270	19.5	+18	58.8	25	19.9	+3	28.3			
7	54	54.5	240	06.0		12.0	332	14.8		21.8	285	21.4		58.6	40	22.4		28.3			
8	69	56.9	255	06.2		10.8	347	15.5		21.9	300	23.3		58.5	55	24.9		28.2			
9	84	59.4	270	06.4		09.5	2	16.1		22.1	315	25.2		58.3	70	27.3		28.2			
10	100	01.9	285	06.6		08.3	17	16.7		22.2	330	27.1		58.2	85	29.8		28.2			
11	115	04.3	300	06.7	+2	07.1	32	17.3	+23	22.3	345	29.0	+18	58.1	100	32.3	+3	28.2			
12	130	06.8	315	06.9	+2	05.9	47	18.0	+23	22.4	0	30.9	+18	57.9	115	34.8	+3	28.2			
13	145	09.3	330	07.1		04.6	62	18.6		22.5	15	32.8		57.8	130	37.3		28.1			
14	160	11.7	345	07.2		03.4	77	19.2		22.6	30	34.7		57.7	145	39.7		28.1			
15	175	14.2	0	07.4		02.2	92	19.9		22.8	45	36.6		57.5	160	42.2		28.1			
16	190	16.7	15	07.6	+2	01.0	107	20.5		22.9	60	38.5		57.4	175	44.7		28.1			
17	205	19.1	30	07.8	+1	59.7	122	21.1	+23	23.0	75	40.4	+18	57.2	190	47.2	+3	28.1			
18	220	21.6	45	07.9	+1	58.5	137	21.8	+23	23.1	90	42.3	+18	57.1	205	49.7	+3	28.0			
19	235	24.0	60	08.1		57.3	152	22.4		23.2	105	44.2		57.0	220	52.2		28.0			
20	250	26.5	75	08.3		56.1	167	23.0		23.3	120	46.1		56.8	235	54.6		28.0			
21	265	29.0	90	08.5		54.8	182	23.6		23.5	135	48.0		56.7	250	57.1		28.0			
22	280	31.4	105	08.6		53.6	197	24.3		23.6	150	49.9		56.6	265	59.6		28.0			
23	295	33.9	120	08.8		52.4	212	24.9		23.7	165	51.8		56.4	281	02.1		27.9			
24	310	36.4	135	09.0	+1	51.2	227	25.5	+23	23.8	180	53.7	+18	56.3	296	04.6	+3	27.9			
Dif	—		+2		-12		+6		+1		+19		-1		+25		0				

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15'8 PMG:12 ^h 06.3 ^m			Edad: 18.6 ^d SD: 15'4 PMG: 2 ^h 39 ^m PHE { 4 ^h : 56'5 12 ^h : 56'7 20 ^h : 56'8 Rº: 44 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	178	25.1	+17	48.5	321	29.6	150	-2	48.8	60 N	20 28	21 27	23 25	20 54	1	8 44	92		
1	193	25.2		47.9	336	03.6	150		33.7	58	16	21 09	22 33	55	5	44	89		
2	208	25.2		47.2	350	37.6	150		18.5	56	20 06	20 53	22 03	57	7	45	85		
3	223	25.3		46.6	5	11.6	150	-2	03.4	54	19 56	40	21 41	58	10	45	82		
4	238	25.3		45.9	19	45.5	149	-1	48.2	52	48	29	24	58	13	45	80		
5	253	25.4	+17	45.3	34	19.5	150	-1	33.0	50	19 41	20 19	21 09	20 59	15	8 46	76		
6	268	25.4	+17	44.7	48	53.4	149	-1	17.8	45	19 25	19 59	20 41	21 01	20	8 46	72		
7	283	25.4		44.0	63	27.3	149	-1	02.6	40	13	43	20	03	24	47	67		
8	298	25.5		43.4	78	01.3	150	-0	47.4	35	19 02	30	20 03	04	28	47	64		
9	313	25.5		42.7	92	35.1	148		32.1	30	18 53	18	19 49	05	31	47	61		
10	328	25.6		42.1	107	09.0	149		16.8	20	37	19 00	28	08	36	48	55		
11	343	25.6	+17	41.4	121	42.9	149	-0	01.6	10 N	18 23	18 45	19 11	21 10	41	8 48	50		
12	358	25.7	+17	40.8	136	16.7	148	+0	13.7	0	18 10	18 31	18 57	21 11	46	8 49	45		
13	13	25.7		40.2	150	50.5	148		29.0	10 S	17 57	19	44	13	51	49	41		
14	28	25.8		39.5	165	24.3	148		44.3	20	43	18 07	33	15	56	50	35		
15	43	25.8		38.9	179	58.1	148	+0	59.6	30	28	17 53	22	18	61	50	30		
16	58	25.9		38.2	194	31.8	147	+1	14.9	35	19	46	16	19	65	50	27		
17	73	25.9	+17	37.6	209	05.6	148	+1	30.3	40	17 09	17 38	18 10	21 21	68	8 51	23		
18	88	26.0	+17	36.9	223	39.3	147	+1	45.6	45	16 57	17 29	18 04	21 23	72	8 51	19		
19	103	26.0		36.3	238	12.9	146	+2	00.9	50	43	18	17 57	25	78	51	15		
20	118	26.1		35.6	252	46.5	146		16.3	52	36	13	54	26	80	52	12		
21	133	26.1		35.0	267	20.1	146		31.6	54	29	08	51	27	83	52	10		
22	148	26.2		34.3	281	53.7	146	+2	46.9	56	21	17 02	48	28	87	52	7		
23	163	26.2		33.7	296	27.3	146	+3	02.3	58	12	16 56	44	29	90	52	4		
24	178	26.3	+17	33.0	311	00.8	145	+3	17.6	60 S	16 01	16 49	17 40	21 31	94	8 52	1		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 3 ^h 17.0 ^m		Mag: -4.3 PMG: 14 ^h 59 ^m		Mag: +1.3 PMG: 8 ^h 50 ^m		Mag: -1.8 PMG: 11 ^h 55 ^m		Mag: +0.6 PMG: 4 ^h 15 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	310	36.4	135	09.0	+1	51.2	227	25.5	+23	23.8	180	53.7	+18	56.3	296	04.6	+3	27.9
1	325	38.8	150	09.2		49.9	242	26.2		23.9	195	55.6		56.2	311	07.1		27.9
2	340	41.3	165	09.3		48.7	257	26.8		24.0	210	57.5		56.0	326	09.5		27.9
3	355	43.8	180	09.5		47.5	272	27.4		24.1	225	59.3		55.9	341	12.0		27.9
4	10	46.2	195	09.7		46.3	287	28.1		24.2	241	01.2		55.7	356	14.5		27.8
5	25	48.7	210	09.9	+1	45.0	302	28.7	+23	24.4	256	03.1	+18	55.6	11	17.0	+3	27.8
6	40	51.2	225	10.1	+1	43.8	317	29.3	+23	24.5	271	05.0	+18	55.5	26	19.5	+3	27.8
7	55	53.6	240	10.2		42.6	332	30.0		24.6	286	06.9		55.3	41	22.0		27.8
8	70	56.1	255	10.4		41.4	347	30.6		24.7	301	08.8		55.2	56	24.5		27.8
9	85	58.5	270	10.6		40.1	2	31.2		24.8	316	10.7		55.1	71	26.9		27.7
10	101	01.0	285	10.8		38.9	17	31.8		24.9	331	12.6		54.9	86	29.4		27.7
11	116	03.5	300	11.0	+1	37.7	32	32.5	+23	25.0	346	14.5	+18	54.8	101	31.9	+3	27.7
12	131	05.9	315	11.2	+1	36.5	47	33.1	+23	25.1	1	16.4	+18	54.6	116	34.4	+3	27.7
13	146	08.4	330	11.3		35.2	62	33.7		25.2	16	18.3		54.5	131	36.9		27.6
14	161	10.9	345	11.5		34.0	77	34.4		25.3	31	20.2		54.4	146	39.4		27.6
15	176	13.3	0	11.7		32.8	92	35.0		25.5	46	22.1		54.2	161	41.9		27.6
16	191	15.8	15	11.9		31.6	107	35.6		25.6	61	24.0		54.1	176	44.3		27.6
17	206	18.3	30	12.1	+1	30.3	122	36.3	+23	25.7	76	25.9	+18	54.0	191	46.8	+3	27.6
18	221	20.7	45	12.3	+1	29.1	137	36.9	+23	25.8	91	27.8	+18	53.8	206	49.3	+3	27.5
19	236	23.2	60	12.5		27.9	152	37.5		25.9	106	29.7		53.7	221	51.8		27.5
20	251	25.6	75	12.7		26.7	167	38.2		26.0	121	31.6		53.5	236	54.3		27.5
21	266	28.1	90	12.8		25.4	182	38.8		26.1	136	33.5		53.4	251	56.8		27.5
22	281	30.6	105	13.0		24.2	197	39.4		26.2	151	35.4		53.3	266	59.3		27.4
23	296	33.0	120	13.2		23.0	212	40.1		26.3	166	37.3		53.1	282	01.8		27.4
24	311	35.5	135	13.4	+1	21.8	227	40.7	+23	26.4	181	39.2	+18	53.0	297	04.2	+3	27.4
Dif	—		+2		-12		+6		+1		+19		-1		+25		0	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG:12 ^h 06.2 ^m			Edad: 19.6 ^d PHE { 4 ^h : 57/0 12 ^h : 57/2 20 ^h : 57/4 R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	26.3	+17	33.0	311	00.8	+3	17.6	60 N	0 48	2 46	3 45	20 54	0	10 14	95		
1	193	26.3		32.4	325	34.2 ¹⁴⁴		33.0 ¹⁵⁴	58	1 40	3 05	3 57	20 59	4	11	90		
2	208	26.4		31.7	340	07.6 ¹⁴⁴	+3	48.3 ¹⁵³	56	2 10	20	4 08	21 03	8	08	87		
3	223	26.4		31.1	354	41.0 ¹⁴⁴	+4	03.6 ¹⁵³	54	32	33	17	06	11	06	83		
4	238	26.5		30.4	9	14.4 ¹⁴⁴		18.9 ¹⁵³	52	2 49	44	25	10	13	03	81		
5	253	26.5	+17	29.8	23	47.7 ¹⁴³	+4	34.2 ¹⁵³	50	3 04	3 54	4 32	21 13	16	10 01	78		
6	268	26.6	+17	29.1	38	21.0 ¹⁴³	+4	49.6 ¹⁵⁴	45	3 32	4 14	4 47	21 20	21	9 56	73		
7	283	26.6		28.5	52	54.2 ¹⁴²	+5	04.8 ¹⁵²	40	3 53	30	5 00	26	25	52	69		
8	298	26.7		27.8	67	27.4 ¹⁴²		20.1 ¹⁵³	35	4 10	43	11	31	29	49	64		
9	313	26.7		27.2	82	00.5 ¹⁴¹		35.4 ¹⁵³	30	23	4 54	20	35	32	46	61		
10	328	26.8		26.5	96	33.6 ¹⁴¹	+5	50.7 ¹⁵³	20	4 45	5 13	36	43	37	41	55		
11	343	26.8	+17	25.8	111	06.6 ¹⁴⁰	+6	05.9 ¹⁵²	10 N	5 02	5 28	5 50	21 50	42	9 37	50		
12	358	26.9	+17	25.2	125	39.6 ¹⁴⁰	+6	21.1 ¹⁵²	0	5 16	5 41	6 03	21 56	47	9 32	46		
13	13	26.9		24.5	140	12.5 ¹³⁹		36.4 ¹⁵³	10 S	28	5 53	15	22 03	51	28	41		
14	28	27.0		23.9	154	45.4 ¹³⁹	+6	51.6 ¹⁵¹	20	39	6 06	29	10	56	24	36		
15	43	27.0		23.2	169	18.2 ¹³⁸	+7	06.7 ¹⁵¹	30	50	19	44	18	62	19	30		
16	58	27.1		22.6	183	51.0 ¹³⁸		21.9 ¹⁵²	35	5 56	26	6 53	22	66	16	27		
17	73	27.1	+17	21.9	198	23.7 ¹³⁷	+7	37.0 ¹⁵¹	40	6 02	6 34	7 03	22 28	69	9 13	23		
18	88	27.2	+17	21.2	212	56.4 ¹³⁷	+7	52.1 ¹⁵¹	45	6 08	6 43	7 14	22 34	74	9 09	19		
19	103	27.2		20.6	227	29.0 ¹³⁶	+8	07.2 ¹⁵¹	50	15	53	28	41	80	04	15		
20	118	27.3		19.9	242	01.5 ¹³⁵		22.3 ¹⁵¹	52	17	6 58	35	45	83	02	12		
21	133	27.4		19.3	256	34.0 ¹³⁵		37.3 ¹⁵⁰	54	21	7 03	42	49	86	9 00	10		
22	148	27.4		18.6	271	06.4 ¹³⁴	+8	52.4 ¹⁵¹	56	24	09	7 50	53	89	8 58	6		
23	163	27.5		17.9	285	38.7 ¹³³	+9	07.3 ¹⁴⁹	58	27	15	8 00	22 58	93	55	3		
24	178	27.5	+17	17.3	300	11.0 ¹³³	+9	22.3 ¹⁵⁰	60 S	6 31	7 22	8 10	23 03	98	8 52	0		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 3 ^h 13.1 ^m		Mag: -4.3 PMG: 14 ^h 59 ^m			Mag: +1.3 PMG: 8 ^h 49 ^m			Mag: -1.8 PMG: 11 ^h 52 ^m			Mag: +0.6 PMG: 4 ^h 11 ^m						
	hG ♂		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	311	35.5	135	13.4	+1	21.8	227	40.7	+23	26.4	181	39.2	+18	53.0	297	04.2	+3	27.4
1	326	38.0	150	13.6		20.5	242	41.3		26.5	196	41.1		52.9	312	06.7		27.4
2	341	40.4	165	13.8		19.3	257	42.0		26.6	211	43.0		52.7	327	09.2		27.4
3	356	42.9	180	14.0		18.1	272	42.6		26.7	226	44.9		52.6	342	11.7		27.3
4	11	45.4	195	14.2		16.9	287	43.2		26.8	241	46.8		52.4	357	14.2		27.3
5	26	47.8	210	14.4	+1	15.6	302	43.9	+23	26.9	256	48.7	+18	52.3	12	16.7	+3	27.3
6	41	50.3	225	14.6	+1	14.4	317	44.5	+23	27.0	271	50.6	+18	52.2	27	19.2	+3	27.3
7	56	52.8	240	14.8		13.2	332	45.1		27.1	286	52.5		52.0	42	21.7		27.2
8	71	55.2	255	15.0		12.0	347	45.8		27.2	301	54.4		51.9	57	24.2		27.2
9	86	57.7	270	15.2		10.7	2	46.4		27.3	316	56.3		51.8	72	26.6		27.2
10	102	00.1	285	15.4		09.5	17	47.0		27.4	331	58.2		51.6	87	29.1		27.2
11	117	02.6	300	15.5	+1	08.3	32	47.7	+23	27.5	347	00.1	+18	51.5	102	31.6	+3	27.2
12	132	05.1	315	15.7	+1	07.1	47	48.3	+23	27.6	2	02.0	+18	51.3	117	34.1	+3	27.1
13	147	07.5	330	15.9		05.8	62	48.9		27.8	17	03.9		51.2	132	36.6		27.1
14	162	10.0	345	16.1		04.6	77	49.6		27.9	32	05.8		51.1	147	39.1		27.1
15	177	12.5	0	16.3		03.4	92	50.2		28.0	47	07.7		50.9	162	41.6		27.1
16	192	14.9	15	16.5		02.2	107	50.8		28.0	62	09.6		50.8	177	44.1		27.0
17	207	17.4	30	16.7	+1	00.9	122	51.5	+23	28.1	77	11.5	+18	50.6	192	46.6	+3	27.0
18	222	19.9	45	16.9	+0	59.7	137	52.1	+23	28.2	92	13.4	+18	50.5	207	49.1	+3	27.0
19	237	22.3	60	17.1		58.5	152	52.7		28.3	107	15.3		50.4	222	51.5		27.0
20	252	24.8	75	17.4		57.3	167	53.4		28.4	122	17.2		50.2	237	54.0		26.9
21	267	27.3	90	17.6		56.0	182	54.0		28.5	137	19.1		50.1	252	56.5		26.9
22	282	29.7	105	17.8		54.8	197	54.6		28.6	152	21.0		50.0	267	59.0		26.9
23	297	32.2	120	18.0		53.6	212	55.3		28.7	167	22.9		49.8	283	01.5		26.9
24	312	34.6	135	18.2	+0	52.4	227	55.9	+23	28.8	182	24.8	+18	49.7	298	04.0	+3	26.9
Dif	—		+2		-12		+6		+1		+19		-1		+25		0	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'8 PMG:12 ^h 06.1 ^m				Edad: 20.6 ^d SD: 15'7 PMG: 4 ^h 07 ^m PHE { 4 ^h : 57'6 12 ^h : 57'8 20 ^h : 58'0 R°: 49 ^m																
	hG ☉	Dec	hG ☾	Dif	Dec	Dif				Civil			Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m			
0	178	27.5	+17	17.3	300	11.0	+9	22.3	149	58	60 N	20 23	21 20	23 06	20 54	4	11 49	102			
1	193	27.6		16.6	314	43.2		37.2	149	58		11	21 03	22 23	21 03	8	41	97			
2	208	27.6		15.9	329	15.4	+9	52.1	149	56		20 01	20 48	21 56	11 12	35	93				
3	223	27.7		15.3	343	47.5	+10	07.0	149	54		19 53	36	36	17 16	29	89				
4	238	27.7		14.6	358	19.5		21.8	148	52		45	25	19	23 19	24	86				
5	253	27.8	+17	13.9	12	51.4	+10	36.6	148	50		19 38	20 16	21 05	21 29	21	11 19	83			
6	268	27.9	+17	13.3	27	23.3	+10	51.3	147	45		19 23	19 56	20 38	21 41	27	11 09	77			
7	283	27.9		12.6	41	55.0	+11	06.1	148	40		11	40	17	21 51	31	11 01	72			
8	298	28.0		12.0	56	26.8		20.7	146	35		19 00	28	20 01	22 00	35	10 53	69			
9	313	28.0		11.3	70	58.4		35.4	147	30		18 51	19 17	19 48	07 38	47	66				
10	328	28.1		10.6	85	29.9	+11	50.0	146	20		36	18 59	26	20 44	36	60				
11	343	28.2	+17	10.0	100	01.4	+12	04.5	145	10 N		18 22	18 44	19 10	22 32	48	10 27	55			
12	358	28.2	+17	09.3	114	32.8	+12	19.0	145	0		18 10	18 31	18 56	22 43	53	10 18	50			
13	13	28.3		08.6	129	04.1		33.4	144	10 S		17 57	19	44	22 54	57	09 46				
14	28	28.3		07.9	143	35.4	+12	47.8	144	20		44	18 07	34	23 06	62	10 00	41			
15	43	28.4		07.3	158	06.5	+13	02.2	144	30		29	17 54	23	20 67	9 49	36				
16	58	28.4		06.6	172	37.6		16.5	143	35		21	47	18	28 71	43	33				
17	73	28.5	+17	05.9	187	08.5	+13	30.8	143	40		17 11	17 40	18 12	23 37	75	9 36	29			
18	88	28.6	+17	05.3	201	39.4	+13	44.9	141	45		17 00	17 31	18 06	23 48	79	9 28	25			
19	103	28.6		04.6	216	10.2	+13	59.1	142	50		16 46	21	18 00	** ** *	**	19 19				
20	118	28.7		03.9	230	40.9	+14	13.2	141	52		39	16	17 57	** ** *	**	14 17				
21	133	28.8		03.2	245	11.5		27.2	140	54		32	11	54	** ** *	**	10 13				
22	148	28.8		02.6	259	42.0		41.2	140	56		24	06	51	** ** *	**	9 04	10			
23	163	28.9		01.9	274	12.5	+14	55.1	139	58		16	17 00	47	** ** *	**	8 58	7			
24	178	28.9	+17	01.2	288	42.8	+15	08.9	138	60 S		16 05	16 53	17 44	** ** *	**	8 52	2			

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 3 ^h 09.2 ^m			Mag: -4.3 PMG: 14 ^h 59 ^m			Mag: +1.3 PMG: 8 ^h 48 ^m			Mag: -1.8 PMG: 11 ^h 49 ^m			Mag: +0.6 PMG: 4 ^h 07 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	312	34.6	135	18.2	+0	52.4	227	55.9	+23	28.8	182	24.8	+18	49.7	298	04.0	
1	327	37.1	150	18.4		51.1	242	56.5		28.9	197	26.7		49.5	313	06.5	
2	342	39.6	165	18.6		49.9	257	57.2		29.0	212	28.6		49.4	328	09.0	
3	357	42.0	180	18.8		48.7	272	57.8		29.1	227	30.5		49.3	343	11.5	
4	12	44.5	195	19.0		47.5	287	58.4		29.2	242	32.4		49.1	358	14.0	
5	27	47.0	210	19.2	+0	46.2	302	59.1	+23	29.3	257	34.3	+18	49.0	13	16.5	
6	42	49.4	225	19.4	+0	45.0	317	59.7	+23	29.4	272	36.2	+18	48.9	28	19.0	
7	57	51.9	240	19.6		43.8	333	00.4		29.5	287	38.0		48.7	43	21.4	
8	72	54.4	255	19.8		42.6	348	01.0		29.6	302	39.9		48.6	58	23.9	
9	87	56.8	270	20.0		41.3	3	01.6		29.7	317	41.8		48.4	73	26.4	
10	102	59.3	285	20.2		40.1	18	02.3		29.8	332	43.7		48.3	88	28.9	
11	118	01.7	300	20.5	+0	38.9	33	02.9	+23	29.9	347	45.6	+18	48.2	103	31.4	
12	133	04.2	315	20.7	+0	37.7	48	03.5	+23	30.0	2	47.5	+18	48.0	118	33.9	
13	148	06.7	330	20.9		36.4	63	04.2		30.1	17	49.4		47.9	133	36.4	
14	163	09.1	345	21.1		35.2	78	04.8		30.1	32	51.3		47.7	148	38.9	
15	178	11.6	0	21.3		34.0	93	05.4		30.2	47	53.2		47.6	163	41.4	
16	193	14.1	15	21.5		32.8	108	06.1		30.3	62	55.1		47.5	178	43.9	
17	208	16.5	30	21.7	+0	31.5	123	06.7	+23	30.4	77	57.0	+18	47.3	193	46.4	
18	223	19.0	45	21.9	+0	30.3	138	07.3	+23	30.5	92	58.9	+18	47.2	208	48.9	
19	238	21.5	60	22.2		29.1	153	08.0		30.6	108	00.8		47.0	223	51.4	
20	253	23.9	75	22.4		27.9	168	08.6		30.7	123	02.7		46.9	238	53.9	
21	268	26.4	90	22.6		26.6	183	09.3		30.8	138	04.6		46.8	253	56.4	
22	283	28.9	105	22.8		25.4	198	09.9		30.9	153	06.5		46.6	268	58.9	
23	298	31.3	120	23.0		24.2	213	10.5		31.0	168	08.4		46.5	284	01.4	
24	313	33.8	135	23.2	+0	23.0	228	11.2	+23	31.0	183	10.3	+18	46.4	299	03.9	
Dif	—		+2	-12			+6	+1			+19	-1			+25	0	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG:12 ^h 06.0 ^m			Edad: 21.6 ^d SD: 15'8 PMG: 4 ^h 55 ^m PHE { 4 ^h : 58'2 12 ^h : 58'4 20 ^h : 58'6 R°: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	28.9	+17	01.2	288	42.8	+15	08.9	60 N	1	07	2	52	3	50	20	56	
1	193	29.0	+17	00.6	303	13.0		22.7	58	1	50	3	10	4	01	21	10	
2	208	29.1	+16	59.9	317	43.2		36.4	56	2	17		24	11	21	18		
3	223	29.1		59.2	332	13.2	+15	50.0	54		37		37	20	32	21		
4	238	29.2		58.5	346	43.1	+16	03.6	52	2	54		48	28	41	24		
5	253	29.2	+16	57.9	1	13.0	+16	17.1	50	3	08	3	57	4	35	21	49	
6	268	29.3	+16	57.2	15	42.7	+16	30.5	45	3	35	4	17	4	50	22	07	
7	283	29.4		56.5	30	12.3		43.9	40	3	55		32	5	02	21	37	
8	298	29.4		55.8	44	41.9	+16	57.2	35	4	12		45	12	33	41		
9	313	29.5		55.1	59	11.3	+17	10.4	30		25	4	56	21	22	44		
10	328	29.6		54.5	73	40.6		23.5	20	4	46	5	13	37	23	03		
11	343	29.6	+16	53.8	88	09.8	+17	36.5	10 N	5	02	5	28	5	50	23	19	
12	358	29.7	+16	53.1	102	38.9	+17	49.5	0	5	16	5	41	6	03	23	34	
13	13	29.8		52.4	117	07.9	+18	02.3	10 S		28	5	53	15	23	50		
14	28	29.8		51.7	131	36.8		15.1	20		38	6	05	28	**	**		
15	43	29.9		51.1	146	05.6		27.8	30		49		17	42	**	**		
16	58	30.0		50.4	160	34.2		40.5	35	5	54		24	6	51	**	**	
17	73	30.0	+16	49.7	175	02.8	+18	53.0	40	6	00	6	32	7	01	**	**	
18	88	30.1	+16	49.0	189	31.2	+19	05.4	45	6	05	6	41	7	12	**	**	
19	103	30.2		48.3	203	59.6		17.7	50		12		51	25	0	01		
20	118	30.2		47.6	218	27.8		30.0	52	15	6	55		32	08	86		
21	133	30.3		47.0	232	55.9		42.1	54	17	7	00		39	15	90		
22	148	30.4		46.3	247	23.8	+19	54.2	56	21		05		46	22	94		
23	163	30.4		45.6	261	51.7	+20	06.1	58	24		11		7	55	31		
24	178	30.5	+16	44.9	276	19.5	+20	17.9	60 S	6	27	7	18	8	05	0	41	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 3 ^h 05.2 ^m			Mag: -4.3 PMG: 14 ^h 58 ^m			Mag: +1.3 PMG: 8 ^h 47 ^m			Mag: -1.8 PMG: 11 ^h 46 ^m			Mag: +0.6 PMG: 4 ^h 03 ^m					
	hG ♈	hG ♊	Dec	hG ♂	Dec	hG ♉	Dec	hG ♊	Dec	hG ♄	Dec	hG ♅	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	313	33.8	135	23.2	+0	23.0	228	11.2	+23	31.0	183	10.3	+18	46.4	299	03.9		
1	328	36.2	150	23.5		21.8	243	11.8		31.1	198	12.2		46.2	314	06.3		
2	343	38.7	165	23.7		20.5	258	12.4		31.2	213	14.1		46.1	329	08.8		
3	358	41.2	180	23.9		19.3	273	13.1		31.3	228	16.0		45.9	344	11.3		
4	13	43.6	195	24.1		18.1	288	13.7		31.4	243	17.9		45.8	359	13.8		
5	28	46.1	210	24.3	+0	16.9	303	14.4	+23	31.5	258	19.8	+18	45.7	14	16.3		
6	43	48.6	225	24.6	+0	15.6	318	15.0	+23	31.6	273	21.7	+18	45.5	29	18.8		
7	58	51.0	240	24.8		14.4	333	15.6		31.7	288	23.6		45.4	44	21.3		
8	73	53.5	255	25.0		13.2	348	16.3		31.7	303	25.5		45.2	59	23.8		
9	88	56.0	270	25.2		12.0	3	16.9		31.8	318	27.4		45.1	74	26.3		
10	103	58.4	285	25.5		10.7	18	17.5		31.9	333	29.3		45.0	89	28.8		
11	119	00.9	300	25.7	+0	09.5	33	18.2	+23	32.0	348	31.2	+18	44.8	104	31.3		
12	134	03.3	315	25.9	+0	08.3	48	18.8	+23	32.1	3	33.1	+18	44.7	119	33.8		
13	149	05.8	330	26.1		07.1	63	19.5		32.2	18	35.0		44.5	134	36.3		
14	164	08.3	345	26.4		05.8	78	20.1		32.2	33	36.9		44.4	149	38.8		
15	179	10.7	0	26.6		04.6	93	20.7		32.3	48	38.8		44.3	164	41.3		
16	194	13.2	15	26.8		03.4	108	21.4		32.4	63	40.7		44.1	179	43.8		
17	209	15.7	30	27.0	+0	02.2	123	22.0	+23	32.5	78	42.6	+18	44.0	194	46.3		
18	224	18.1	45	27.3	+0	00.9	138	22.7	+23	32.6	93	44.5	+18	43.9	209	48.8		
19	239	20.6	60	27.5	-0	00.3	153	23.3		32.7	108	46.4		43.7	224	51.3		
20	254	23.1	75	27.7		01.5	168	23.9		32.7	123	48.3		43.6	239	53.8		
21	269	25.5	90	28.0		02.7	183	24.6		32.8	138	50.2		43.4	254	56.3		
22	284	28.0	105	28.2		03.9	198	25.2		32.9	153	52.1		43.3	269	58.8		
23	299	30.5	120	28.4		05.2	213	25.8		33.0	168	54.0		43.2	285	01.3		
24	314	32.9	135	28.7	-0	06.4	228	26.5	+23	33.1	183	55.9	+18	43.0	300	03.8		
Dif	—			+2			+6			+1			+19			-1		
																+25		

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'8 PMG:12 ^h 05.9 ^m				Edad: 22.6 ^d SD: 16'0 PMG: 5 ^h 47 ^m PHE { 4 ^h : 58'8 12 ^h : 59'0 20 ^h : 59'2 R°: 59 ^m															
	hG ☉	Dec			hG ☾	Dif					Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	178	30.5	+16	44.9	276	19.5	+20	17.9	118	60 N	20 18	21 14	22 50	21 02	16	15	17	111		
1	193	30.6		44.2	290	47.1		29.7	116	58	20 07	20 57	22 14	22 25		14	58	102		
2	208	30.6		43.5	305	14.6		41.3	115	56	19 57	43	21 49	39 30		42	96			
3	223	30.7		42.8	319	42.0	+20	52.8	115	54		49	31	30	21 53	35	28	92		
4	238	30.8		42.2	334	09.3	+21	04.2	114	52		41	21	14	22 05	38	16	88		
5	253	30.8	+16	41.5	348	36.4	+21	15.5	113	50	19 34	20 12	21 01	22 16	41	14	05	86		
6	268	30.9	+16	40.8	3	03.5	+21	26.7	112	45	19 20	19 53	20 34	22 40	45	13	44	80		
7	283	31.0		40.1	17	30.4		37.8	111	40	19 08	38	20 14	22 58	49	26	76			
8	298	31.0		39.4	31	57.2		48.7	109	35	18 58	26	19 59	23 14	51	13	11	74		
9	313	31.1		38.7	46	23.9	+21	59.6	109	30		49	19 15	46	28	53	12	58	71	
10	328	31.2		38.0	60	50.4	+22	10.3	107	20		34	18 58	25	23 51	57	37	66		
11	343	31.3	+16	37.3	75	16.9	+22	20.9	106	10 N	18 21	18 43	19 09	** ** *	**	12	18	63		
12	358	31.3	+16	36.6	89	43.2	+22	31.3	104	0	18 09	18 31	18 56	** ** *	**	12	00	61		
13	13	31.4		36.0	104	09.4		41.7	102	10 S	17 57	19	45	** ** *	**	11	43	57		
14	28	31.5		35.3	118	35.5	+22	51.9	102	20		45	18 08	34	0 07	65	25	53		
15	43	31.5		34.6	133	01.4	+23	02.0	101	30		30	17 55	24	26	70	11	03	49	
16	58	31.6		33.9	147	27.3		11.9	99	35		22	49	19	37	73	10	51	46	
17	73	31.7	+16	33.2	161	53.0	+23	21.7	98	40	17 13	17 41	18 14	0 50	77	10	37	43		
18	88	31.8	+16	32.5	176	18.6	+23	31.4	97	45	17 02	17 33	18 08	1 06	81	10	20	39		
19	103	31.8		31.8	190	44.1		40.9	95	50	16 49	23	18 02	25	87	9	59	34		
20	118	31.9		31.1	205	09.4		50.4	95	52		43	19	17 59	34	90	49	31		
21	133	32.0		30.4	219	34.7	+23	59.6	92	54		36	14	57	45	93	39	27		
22	148	32.1		29.7	233	59.8	+24	08.7	90	56		28	09	54	1 56	99	26	23		
23	163	32.1		29.0	248	24.8		17.7	88	58		20	17 03	51	2 10	104	9	12	17	
24	178	32.2	+16	28.3	262	49.7	+24	26.5	88	60 S	16 10	16 57	17 47	2 26	113	8	55	9		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO											
	PMG 3 ^h 01.3 ^m		Mag: -4.3 PMG: 14 ^h 58 ^m		Mag: +1.3 PMG: 8 ^h 46 ^m		Mag: -1.8 PMG: 11 ^h 43 ^m		Mag: +0.6 PMG: 3 ^h 59 ^m											
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'								
0	314	32.9	135	28.7	-0	06.4	228	26.5	+23	33.1	183	55.9	+18	43.0	300	03.8	+3	25.6		
1	329	35.4	150	28.9		07.6	243	27.1		33.1	198	57.8		42.9	315	06.3		25.6		
2	344	37.8	165	29.1		08.8	258	27.8		33.2	213	59.7		42.7	330	08.8		25.6		
3	359	40.3	180	29.4		10.1	273	28.4		33.3	229	01.6		42.6	345	11.3		25.6		
4	14	42.8	195	29.6		11.3	288	29.0		33.4	244	03.5		42.5	0	13.8		25.5		
5	29	45.2	210	29.8	-0	12.5	303	29.7	+23	33.4	259	05.4	+18	42.3	15	16.3	+3	25.5		
6	44	47.7	225	30.1	-0	13.7	318	30.3	+23	33.5	274	07.3	+18	42.2	30	18.8	+3	25.5		
7	59	50.2	240	30.3		15.0	333	31.0		33.6	289	09.2		42.0	45	21.3		25.4		
8	74	52.6	255	30.5		16.2	348	31.6		33.7	304	11.1		41.9	60	23.8		25.4		
9	89	55.1	270	30.8		17.4	3	32.2		33.8	319	13.0		41.8	75	26.3		25.4		
10	104	57.6	285	31.0		18.6	18	32.9		33.8	334	14.9		41.6	90	28.8		25.4		
11	120	00.0	300	31.2	-0	19.9	33	33.5	+23	33.9	349	16.8	+18	41.5	105	31.3	+3	25.3		
12	135	02.5	315	31.5	-0	21.1	48	34.2	+23	34.0	4	18.7	+18	41.3	120	33.8	+3	25.3		
13	150	05.0	330	31.7		22.3	63	34.8		34.1	19	20.6		41.2	135	36.3		25.3		
14	165	07.4	345	32.0		23.5	78	35.4		34.1	34	22.5		41.1	150	38.8		25.3		
15	180	09.9	0	32.2		24.7	93	36.1		34.2	49	24.4		40.9	165	41.3		25.2		
16	195	12.3	15	32.4		26.0	108	36.7		34.3	64	26.3		40.8	180	43.8		25.2		
17	210	14.8	30	32.7	-0	27.2	123	37.4	+23	34.4	79	28.2	+18	40.6	195	46.3	+3	25.2		
18	225	17.3	45	32.9	-0	28.4	138	38.0	+23	34.4	94	30.1	+18	40.5	210	48.8	+3	25.1		
19	240	19.7	60	33.2		29.6	153	38.7		34.5	109	32.0		40.4	225	51.3		25.1		
20	255	22.2	75	33.4		30.9	168	39.3		34.6	124	33.9		40.2	240	53.8		25.1		
21	270	24.7	90	33.7		32.1	183	39.9		34.6	139	35.8		40.1	255	56.3		25.1		
22	285	27.1	105	33.9		33.3	198	40.6		34.7	154	37.7		39.9	270	58.8		25.0		
23	300	29.6	120	34.1		34.5	213	41.2		34.8	169	39.6		39.8	286	01.3		25.0		
24	315	32.1	135	34.4	-0	35.7	228	41.9	+23	34.9	184	41.5	+18	39.7	301	03.8	+3	25.0		
Dif	—		+2		-12		+6		+1		+19		-1		+25		0			

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG:12 ^h 05.8 ^m			Edad: 23.6 ^d SD: 16 ^h 1 PMG: 6 ^h 45 ^m							PHE { 4 ^h : 59 ^h 3 12 ^h : 59 ^h 5 20 ^h : 59 ^h 7 R°: 62 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Náutico	Civil			Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	178	32.2	+16	28.3	262	49.7	+24	26.5	87	60 N	1 22	2 59	3 55	21 16	40	17 07	94		
1	193	32.3		27.6	277	14.5		35.2	85	58	1 59	3 15	4 06	21 45	47	16 38	87		
2	208	32.3		26.9	291	39.1		43.7	84	56	2 23	29	15	22 08	51	16 16	83		
3	223	32.4		26.2	306	03.6	+24	52.1	84	54	43	41	24	26 53		15 58	80		
4	238	32.5		25.5	320	28.1	+25	00.3	82	52	2 58	3 51	31	42 55		43 78			
5	253	32.6	+16	24.8	334	52.4	+25	08.4	81	50	3 12	4 00	4 38	22 56	56	15 30	76		
6	268	32.6	+16	24.1	349	16.6	+25	16.3	79	45	3 38	4 19	4 52	23 23	59	15 02	74		
7	283	32.7		23.4	3	40.6		24.1	78	40	3 58	34	5 04	23 46	59	14 41	71		
8	298	32.8		22.7	18	04.6		31.7	76	35	4 13	46	14	** ** *		23 70			
9	313	32.9		22.0	32	28.5		39.1	74	30	26	4 57	23	** ** *		14 08	69		
10	328	33.0		21.3	46	52.2		46.3	72	20	4 47	5 14	37	** ** *		13 42	67		
11	343	33.0	+16	20.6	61	15.9	+25	53.4	71	10 N	5 03	5 28	5 50	0 11	59	13 20	64		
12	358	33.1	+16	19.9	75	39.4	+26	00.4	70	0	5 16	5 41	6 02	0 31	61	12 59	63		
13	13	33.2		19.2	90	02.9		07.1	67	10 S	27	5 52	14	0 50	63	38 62			
14	28	33.3		18.5	104	26.2		13.7	66	20	37	6 04	27	1 11	66	12 16	59		
15	43	33.3		17.8	118	49.4		20.1	64	30	47	16	41	35 69		11 51	56		
16	58	33.4		17.1	133	12.5		26.4	63	35	52	23	49	1 49	72	36 55			
17	73	33.5	+16	16.4	147	35.6	+26	32.5	61	40	5 58	6 30	6 58	2 06	74	11 18	54		
18	88	33.6	+16	15.7	161	58.5	+26	38.4	59	45	6 03	6 38	7 09	2 25	78	10 58	50		
19	103	33.6		15.0	176	21.3		44.1	57	50	09	48	22	2 51	81	31 47			
20	118	33.7		14.3	190	44.1		49.6	55	52	11	52	28	3 03	84	19 44			
21	133	33.8		13.6	205	06.7	+26	55.0	54	54	14	6 57	35	17 87		10 04	42		
22	148	33.9		12.9	219	29.3	+27	00.1	51	56	17	7 02	42	33 91		9 48	38		
23	163	34.0		12.2	233	51.8		05.1	50	58	20	07	7 51	3 53	97	28 32			
24	178	34.0	+16	11.5	248	14.2	+27	09.9	48	60 S	6 23	7 14	8 00	4 17	108	9 02	22		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 57.4 ^m		Mag: -4.4 PMG: 14 ^h 57 ^m		Mag: +1.3 PMG: 8 ^h 45 ^m		Mag: -1.8 PMG: 11 ^h 40 ^m		Mag: +0.6 PMG: 3 ^h 55 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	315	32.1	135	34.4	-0	35.7	228	41.9	+23	34.9	184	41.5	+18	39.7	301	03.8	+3	25.0
1	330	34.5	150	34.6		37.0	243	42.5		34.9	199	43.4		39.5	316	06.3		24.9
2	345	37.0	165	34.9		38.2	258	43.1		35.0	214	45.3		39.4	331	08.8		24.9
3	0	39.5	180	35.1		39.4	273	43.8		35.1	229	47.2		39.2	346	11.3		24.9
4	15	41.9	195	35.4		40.6	288	44.4		35.1	244	49.1		39.1	1	13.8		24.9
5	30	44.4	210	35.6	-0	41.9	303	45.1	+23	35.2	259	51.0	+18	39.0	16	16.4	+3	24.8
6	45	46.8	225	35.9	-0	43.1	318	45.7	+23	35.3	274	52.9	+18	38.8	31	18.9	+3	24.8
7	60	49.3	240	36.1		44.3	333	46.4		35.3	289	54.8		38.7	46	21.4		24.8
8	75	51.8	255	36.4		45.5	348	47.0		35.4	304	56.7		38.5	61	23.9		24.7
9	90	54.2	270	36.6		46.7	3	47.6		35.5	319	58.6		38.4	76	26.4		24.7
10	105	56.7	285	36.9		48.0	18	48.3		35.6	335	00.5		38.3	91	28.9		24.7
11	120	59.2	300	37.1	-0	49.2	33	48.9	+23	35.6	350	02.4	+18	38.1	106	31.4	+3	24.7
12	136	01.6	315	37.4	-0	50.4	48	49.6	+23	35.7	5	04.3	+18	38.0	121	33.9	+3	24.6
13	151	04.1	330	37.6		51.6	63	50.2		35.8	20	06.2		37.8	136	36.4		24.6
14	166	06.6	345	37.9		52.8	78	50.9		35.8	35	08.1		37.7	151	38.9		24.6
15	181	09.0	0	38.1		54.1	93	51.5		35.9	50	10.0		37.6	166	41.4		24.5
16	196	11.5	15	38.4		55.3	108	52.1		35.9	65	11.9		37.4	181	43.9		24.5
17	211	13.9	30	38.7	-0	56.5	123	52.8	+23	36.0	80	13.8	+18	37.3	196	46.4	+3	24.5
18	226	16.4	45	38.9	-0	57.7	138	53.4	+23	36.1	95	15.7	+18	37.1	211	48.9	+3	24.4
19	241	18.9	60	39.2	-0	58.9	153	54.1		36.1	110	17.6		37.0	226	51.4		24.4
20	256	21.3	75	39.4	-1	00.2	168	54.7		36.2	125	19.6		36.9	241	53.9		24.4
21	271	23.8	90	39.7		01.4	183	55.4		36.3	140	21.5		36.7	256	56.4		24.4
22	286	26.3	105	39.9		02.6	198	56.0		36.3	155	23.4		36.6	271	58.9		24.3
23	301	28.7	120	40.2		03.8	213	56.7		36.4	170	25.3		36.4	287	01.5		24.3
24	316	31.2	135	40.5	-1	05.1	228	57.3	+23	36.5	185	27.2	+18	36.3	302	04.0	+3	24.3
Dif	—		+3		-12		+6		+1		+19		-1		+25		0	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 ^m PMG: 12 ^h 05.7 ^m				Edad: 24.6 ^d SD: 16 ^h 3 ^m PMG: 7 ^h 47 ^m													
	hG ☉ Dec				hG ☾ Dif Dec Dif													
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	34.0	+16	11.5	248	14.2	33	+27	09.9	46	60 N	20 12	21 07	22 37	21 56	87	18 41 52	
1	193	34.1		10.8	262	36.5	32		14.5	44	58	20 02	20 52	22 05	22 32	82	18 05 57	
2	208	34.2		10.0	276	58.7	31		18.9	43	56	19 53	38	21 42	22 59	79	17 39 59	
3	223	34.3		09.3	291	20.8	31		23.2	40	54	45	27	24	23 19	78	18 61	
4	238	34.4		08.6	305	42.9	31		27.2	40	52	38	17	21 09	37	76	17 01 61	
5	253	34.4	+16	07.9	320	04.9	30	+27	31.1	39	50	19 31	20 08	20 56	23 52	75	16 46 62	
6	268	34.5	+16	07.2	334	26.8	29	+27	34.7	36	45	19 17	19 50	20 31	** ** *		16 16 64	
7	283	34.6		06.5	348	48.7	29		38.2	35	40	19 06	35	20 12	** ** *		15 52 65	
8	298	34.7		05.8	3	10.5	28		41.5	33	35	18 56	23	19 56	0 04	62	33 65	
9	313	34.8		05.1	17	32.2	27		44.5	30	30	48	19 13	44	20	63	15 17 65	
10	328	34.9		04.4	31	53.8	26		47.4	29	20	33	18 56	24	0 47	64	14 49 65	
11	343	34.9	+16	03.6	46	15.4	26	+27	50.1	27	10 N	18 21	18 43	19 08	1 10	65	14 24 67	
12	358	35.0	+16	02.9	60	37.0	26	+27	52.6	25	0	18 09	18 31	18 56	1 32	65	14 02 66	
13	13	35.1		02.2	74	58.4	24		54.8	22	10 S	17 58	19	45	1 53	67	13 40 66	
14	28	35.2		01.5	89	19.9	25		56.9	21	20	45	18 08	35	2 17	67	13 15 67	
15	43	35.3		00.8	103	41.3	24	+27	58.8	19	30	32	17 57	25	2 44	69	12 47 67	
16	58	35.4	+16	00.1	118	02.6	23	+28	00.5	17	35	24	50	20	3 01	68	31 67	
17	73	35.4	+15	59.4	132	23.9	23	+28	01.9	14	40	17 15	17 43	18 15	3 20	69	12 12 66	
18	88	35.5	+15	58.6	146	45.1	22	+28	03.2	13	45	17 04	17 35	18 10	3 43	70	11 48 67	
19	103	35.6		57.9	161	06.4	23		04.3	11	50	16 51	26	05	4 12	71	18 67	
20	118	35.7		57.2	175	27.5	21		05.1	8	52	46	22	02	27	71	11 03 67	
21	133	35.8		56.5	189	48.7	22		05.8	7	54	39	17	18 00	4 44	72	10 46 66	
22	148	35.9		55.8	204	09.8	21		06.2	4	56	32	12	17 57	5 04	73	26 65	
23	163	35.9		55.1	218	30.9	21		06.4	2	58	24	07	54	5 30	74	10 00 65	
24	178	36.0	+15	54.3	232	52.0	21	+28	06.5	1	60 S	16 14	17 01	17 51	6 05	76	9 24 63	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 2 ^h 53.4 ^m		Mag: -4.4 PMG: 14 ^h 57 ^m		Mag: +1.3 PMG: 8 ^h 44 ^m		Mag: -1.8 PMG: 11 ^h 37 ^m		Mag: +0.6 PMG: 3 ^h 51 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	316	31.2	135	40.5	-1	05.1	228	57.3	+23	36.5	185	27.2	+18	36.3	302	04.0	+3	24.3
1	331	33.7	150	40.7		06.3	243	57.9		36.5	200	29.1		36.2	317	06.5		24.2
2	346	36.1	165	41.0		07.5	258	58.6		36.6	215	31.0		36.0	332	09.0		24.2
3	1	38.6	180	41.2		08.7	273	59.2		36.6	230	32.9		35.9	347	11.5		24.2
4	16	41.1	195	41.5		09.9	288	59.9		36.7	245	34.8		35.7	2	14.0		24.1
5	31	43.5	210	41.8	-1	11.2	304	00.5	+23	36.8	260	36.7	+18	35.6	17	16.5	+3	24.1
6	46	46.0	225	42.0	-1	12.4	319	01.2	+23	36.8	275	38.6	+18	35.5	32	19.0	+3	24.1
7	61	48.4	240	42.3		13.6	334	01.8		36.9	290	40.5		35.3	47	21.5		24.1
8	76	50.9	255	42.5		14.8	349	02.5		37.0	305	42.4		35.2	62	24.0		24.0
9	91	53.4	270	42.8		16.0	4	03.1		37.0	320	44.3		35.0	77	26.5		24.0
10	106	55.8	285	43.1		17.3	19	03.8		37.1	335	46.2		34.9	92	29.0		24.0
11	121	58.3	300	43.3	-1	18.5	34	04.4	+23	37.1	350	48.1	+18	34.8	107	31.6	+3	23.9
12	137	00.8	315	43.6	-1	19.7	49	05.0	+23	37.2	5	50.0	+18	34.6	122	34.1	+3	23.9
13	152	03.2	330	43.9		20.9	64	05.7		37.2	20	51.9		34.5	137	36.6		23.9
14	167	05.7	345	44.1		22.1	79	06.3		37.3	35	53.8		34.3	152	39.1		23.8
15	182	08.2	0	44.4		23.3	94	07.0		37.4	50	55.7		34.2	167	41.6		23.8
16	197	10.6	15	44.7		24.6	109	07.6		37.4	65	57.6		34.1	182	44.1		23.8
17	212	13.1	30	44.9	-1	25.8	124	08.3	+23	37.5	80	59.5	+18	33.9	197	46.6	+3	23.7
18	227	15.6	45	45.2	-1	27.0	139	08.9	+23	37.5	96	01.4	+18	33.8	212	49.1	+3	23.7
19	242	18.0	60	45.5		28.2	154	09.6		37.6	111	03.3		33.6	227	51.6		23.7
20	257	20.5	75	45.8		29.4	169	10.2		37.6	126	05.2		33.5	242	54.1		23.7
21	272	22.9	90	46.0		30.7	184	10.9		37.7	141	07.1		33.3	257	56.7		23.6
22	287	25.4	105	46.3		31.9	199	11.5		37.8	156	09.0		33.2	272	59.2		23.6
23	302	27.9	120	46.6		33.1	214	12.2		37.8	171	10.9		33.1	288	01.7		23.6
24	317	30.3	135	46.8	-1	34.3	229	12.8	+23	37.9	186	12.8	+18	32.9	303	04.2	+3	23.5
Dif	—		+3		-12		+6		+1		+19		-1		+25		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna								
	SD: 15 ^h 8 PMG: 12 ^h 05.5 ^m			Edad: 25.6 ^d PHE { 4 ^h : 60'2 12 ^h : 60'3 20 ^h : 60'3 SD: 16'4 PMG: 8 ^h 52 ^m R°: 64 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°									
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m					
0	178	36.0	+15	54.3	232	52.0	+28	06.5	2	1	35	3	05	4	00	23	22	113	19	32	19			
1	193	36.1		53.6	247	13.0		06.3	4	2	07		20	10	23	53	103	19	00	29				
2	208	36.2		52.9	261	34.1		05.9	6	3		34	19	**	**	**								
3	223	36.3		52.2	275	55.1		05.3	8	4	28		45	27	**	**	**							
4	238	36.4		51.5	290	16.1		04.5	10	5	03	3	55	34	**	**	**							
5	253	36.5	+15	50.7	304	37.1	+28	03.5	12	6	16	4	04	4	41	**	**	**						
6	268	36.6	+15	50.0	318	58.1	+28	02.3	14	7	41	4	22	4	54	0	22	72	17	18	49			
7	283	36.6		49.3	333	19.1	+28	00.9	16	8	00		36	5	06	0	45	71	16	55	52			
8	298	36.7		48.6	347	40.2	+27	59.2	17	9	15		48	15	1	04	70		37	54				
9	313	36.8		47.9	2	01.2		57.4	18	10	28	4	58	24	21	69	16	20	56					
10	328	36.9		47.1	16	22.2		55.3	20	11	48	5	15	38	1	49	68	15	53	59				
11	343	37.0	+15	46.4	30	43.2	+27	53.1	22	12	03	5	29	5	51	2	13	67	15	29	62			
12	358	37.1	+15	45.7	45	04.3	+27	50.6	25	13	16	5	41	6	02	2	36	65	15	07	64			
13	13	37.2		45.0	59	25.3		47.9	27	14	27	5	52	14	2	59	63	14	45	66				
14	28	37.3		44.2	73	46.4		45.1	28	15	36	6	03	26	3	23	62	14	21	68				
15	43	37.4		43.5	88	07.5		42.0	31	16	46		14	39	3	51	60	13	53	71				
16	58	37.4		42.8	102	28.7		38.7	33	17	51	21	47	47	4	08	59		36	73				
17	73	37.5	+15	42.1	116	49.8	+27	35.2	35	18	55	6	28	6	56	4	28	57	13	17	75			
18	88	37.6	+15	41.3	131	11.0	+27	31.5	37	19	01	6	35	7	06	4	51	56	12	53	78			
19	103	37.7		40.6	145	32.3		27.6	39	20	06		44	19	5	22	52		23	82				
20	118	37.8		39.9	159	53.5		23.5	41	21	08		49	25	37	50		12	08	84				
21	133	37.9		39.1	174	14.9		19.2	43	22	11		53	31	5	54	48	11	51	86				
22	148	38.0		38.4	188	36.2		14.7	45	23	13	6	58	38	6	15	45		30	90				
23	163	38.1		37.7	202	57.6		09.9	48	24	16	7	03	46	6	42	40	11	03	95				
24	178	38.2	+15	37.0	217	19.1	+27	05.0	49	25	19	7	09	7	55	7	20	30	10	26	105			
UT	ARIES PMG: 2 ^h 49.5 ^m			VENUS Mag: -4.4 PMG: 14 ^h 57 ^m			MARTE Mag: +1.3 PMG: 8 ^h 43 ^m			JÚPITER Mag: -1.8 PMG: 11 ^h 34 ^m			SATURNO Mag: +0.6 PMG: 3 ^h 47 ^m											
	hG ♈			hG ♊	Dec		hG ♊	Dec		hG ♃	Dec		hG ♄	Dec										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	317	30.3	135	46.8	-1	34.3	229	12.8	+23	37.9	186	12.8	+18	32.9	303	04.2								
1	332	32.8	150	47.1		35.5	244	13.5		37.9	201	14.7		32.8	318	06.7								
2	347	35.3	165	47.4		36.7	259	14.1		38.0	216	16.6		32.6	333	09.2								
3	2	37.7	180	47.7		38.0	274	14.7		38.0	231	18.5		32.5	348	11.7								
4	17	40.2	195	47.9		39.2	289	15.4		38.1	246	20.4		32.4	3	14.2								
5	32	42.7	210	48.2	-1	40.4	304	16.0	+23	38.1	261	22.3	+18	32.2	18	16.7								
6	47	45.1	225	48.5	-1	41.6	319	16.7	+23	38.2	276	24.2	+18	32.1	33	19.3								
7	62	47.6	240	48.8		42.8	334	17.3		38.2	291	26.1		31.9	48	21.8								
8	77	50.1	255	49.0		44.1	349	18.0		38.3	306	28.0		31.8	63	24.3								
9	92	52.5	270	49.3		45.3	4	18.6		38.3	321	29.9		31.7	78	26.8								
10	107	55.0	285	49.6		46.5	19	19.3		38.4	336	31.8		31.5	93	29.3								
11	122	57.4	300	49.9	-1	47.7	34	19.9	+23	38.4	351	33.7	+18	31.4	108	31.8								
12	137	59.9	315	50.2	-1	48.9	49	20.6	+23	38.5	6	35.6	+18	31.2	123	34.3								
13	153	02.4	330	50.4		50.1	64	21.2		38.5	21	37.5		31.1	138	36.8								
14	168	04.8	345	50.7		51.4	79	21.9		38.6	36	39.4		31.0	153	39.4								
15	183	07.3	0	51.0		52.6	94	22.5		38.6	51	41.3		30.8	168	41.9								
16	198	09.8	15	51.3		53.8	109	23.2		38.7	66	43.2		30.7	183	44.4								
17	213	12.2	30	51.6	-1	55.0	124	23.8	+23	38.7	81	45.1	+18	30.5	198	46.9								
18	228	14.7	45	51.9	-1	56.2	139	24.5	+23	38.8	96	47.0	+18	30.4	213	49.4								
19	243	17.2	60	52.1		57.4	154	25.1		38.8	111	49.0		30.2	228	51.9								
20	258	19.6	75	52.4		58.7	169	25.8		38.9	126	50.9		30.1	243	54.4								
21	273	22.1	90	52.7	-1	59.9	184	26.4		38.9	141	52.8		30.0	258	57.0								
22	288	24.6	105	53.0	-2	01.1	199	27.1		39.0	156	54.7		29.8	273	59.5								
23	303	27.0	120	53.3		02.3	214	27.7		39.0	171	56.6		29.7	289	02.0								
24	318	29.5	135	53.6	-2	03.5	229	28.4	+23	39.1	186	58.5	+18	29.5	304	04.5								
Dif	—			+3			-12			+6			+1			+19			-1			+25		

UT	SOL				● LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG:12 ^h 05.4 ^m				Edad: 26.6 ^d SD: 16'4 PMG: 9 ^h 56 ^m											
					PHE { 4 ^h : 60'3 12 ^h : 60'4 20 ^h : 60'3 R ^o : 63 ^m											
	hG ☉	Dec			hG ☾	Dif		Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'		°	'	°	h m	h m	h m	h m m	h m m	
0	178	38.2	+15	37.0	217	19.1	25	+27	05.0	51	60 N	20 07	21 01	22 25	** ** *	19 51 9
1	193	38.3		36.2	231	40.6	26	+26	59.9	53	58	19 57	20 46	21 56	** ** *	29 16
2	208	38.4		35.5	246	02.2	26		54.6	55	56	48	33	35	0 17	98
3	223	38.4		34.8	260	23.8	26		49.1	55	54	41	22	18	36	93
4	238	38.5		34.0	274	45.5	27		43.4	57	52	34	13	21 04	0 52	90
5	253	38.6	+15	33.3	289	07.2	27	+26	37.5	59	50	19 28	20 04	20 51	1 06	87
6	268	38.7	+15	32.6	303	29.0	28	+26	31.4	61	45	19 14	19 47	20 27	1 34	83
7	283	38.8		31.8	317	50.9	29		25.1	63	40	19 03	33	20 09	1 56	79
8	298	38.9		31.1	332	12.8	29		18.6	65	35	18 54	21	19 54	2 14	77
9	313	39.0		30.4	346	34.9	31		12.0	66	30	46	19 11	42	30	74
10	328	39.1		29.6	0	56.9	30	+26	05.1	69	20	32	18 55	22	2 57	70
11	343	39.2	+15	28.9	15	19.1	32	+25	58.1	70	10 N	18 20	18 42	19 07	3 20	66
12	358	39.3	+15	28.2	29	41.4	33	+25	50.8	73	0	18 09	18 30	18 55	3 41	64
13	13	39.4		27.4	44	03.7	33		43.4	74	10 S	17 58	19	45	4 02	61
14	28	39.5		26.7	58	26.1	34		35.8	76	20	46	18 09	35	25	57
15	43	39.6		26.0	72	48.6	35		28.1	77	30	33	17 58	26	4 51	53
16	58	39.7		25.2	87	11.2	36		20.1	80	35	25	51	22	5 07	51
17	73	39.8	+15	24.5	101	33.9	37	+25	12.0	81	40	17 17	17 45	18 17	5 25	47
18	88	39.9	+15	23.8	115	56.6	37	+25	03.6	84	45	17 06	17 37	18 12	5 47	43
19	103	40.0		23.0	130	19.5	39	+24	55.2	87	50	16 54	29	07	6 14	38
20	118	40.0		22.3	144	42.4	39		46.5	87	52	49	25	05	27	35
21	133	40.1		21.6	159	05.5	41		37.7	88	54	42	20	03	6 42	32
22	148	40.2		20.8	173	28.6	41		28.6	91	56	36	16	18 00	7 00	27
23	163	40.3		20.1	187	51.8	42		19.5	91	58	28	11	17 58	22	21
24	178	40.4	+15	19.3	202	15.2	44	+24	10.1	94	60 S	16 19	17 05	17 55	7 50	11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 2 ^h 45.6 ^m		Mag: -4.4 PMG: 14 ^h 56 ^m		Mag: +1.3 PMG: 8 ^h 42 ^m		Mag: -1.8 PMG: 11 ^h 31 ^m		Mag: +0.6 PMG: 3 ^h 43 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	318	29.5	135	53.6	-2	03.5	229	28.4	+23	39.1
1	333	31.9	150	53.8		04.7	244	29.0		39.1
2	348	34.4	165	54.1		05.9	259	29.7		39.2
3	3	36.9	180	54.4		07.2	274	30.3		39.2
4	18	39.3	195	54.7		08.4	289	31.0		39.3
5	33	41.8	210	55.0	-2	09.6	304	31.6	+23	39.3
6	48	44.3	225	55.3	-2	10.8	319	32.3	+23	39.3
7	63	46.7	240	55.6		12.0	334	32.9		39.4
8	78	49.2	255	55.9		13.2	349	33.6		39.4
9	93	51.7	270	56.2		14.5	4	34.2		39.5
10	108	54.1	285	56.5		15.7	19	34.9		39.5
11	123	56.6	300	56.8	-2	16.9	34	35.5	+23	39.6
12	138	59.1	315	57.0	-2	18.1	49	36.2	+23	39.6
13	154	01.5	330	57.3		19.3	64	36.8		39.6
14	169	04.0	345	57.6		20.5	79	37.5		39.7
15	184	06.4	0	57.9		21.7	94	38.1		39.7
16	199	08.9	15	58.2		23.0	109	38.8		39.8
17	214	11.4	30	58.5	-2	24.2	124	39.5	+23	39.8
18	229	13.8	45	58.8	-2	25.4	139	40.1	+23	39.8
19	244	16.3	60	59.1		26.6	154	40.8		39.9
20	259	18.8	75	59.4		27.8	169	41.4		39.9
21	274	21.2	90	59.7		29.0	184	42.1		40.0
22	289	23.7	106	00.0		30.2	199	42.7		40.0
23	304	26.2	121	00.3		31.4	214	43.4		40.0
24	319	28.6	136	00.6	-2	32.7	229	44.0	+23	40.1
Dif	—		+3	-12		+7	0		+19	-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG:12 ^h 05.2 ^m			Edad: 27.6 ^d SD: 16'4 PMG: 10 ^h 57 ^m												
				PHE { 4 ^h : 60'3 12 ^h : 60'2 20 ^h : 60'1 Rº: 57 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	º	h	m	h	m	h	m	h	m
0	178	40.4	+15	19.3	202	15.2	+24	10.1	60 N	1 46	3 11	4 04	1 15	115	19 58	3
1	193	40.5		18.6	216	38.6	+24	00.6	58	2 15	26	14		36 107	44	8
2	208	40.6		17.9	231	02.2	+23	51.0	56		36	23		1 53 102	31	13
3	223	40.7		17.1	245	25.8		41.1	54	2 53	49	31	2	08 97	21	16
4	238	40.8		16.4	259	49.6		31.1	52	3 08	3 58	37		21 93	11	19
5	253	40.9	+15	15.6	274	13.4	+23	21.0	50	3 20	4 07	4 44	2	32 90	19 02	23
6	268	41.0	+15	14.9	288	37.4	+23	10.7	45	3 44	4 24	4 57	2	55 84	18 44	28
7	283	41.1		14.1	303	01.4	+23	00.2	40	4 02	38	5 08	3	14 79	28	33
8	298	41.2		13.4	317	25.6	+22	49.6	35	17	4 50	17		29 75	15	37
9	313	41.3		12.7	331	49.9		38.9	30	29	5 00	25	3	43 71	18 04	40
10	328	41.4		11.9	346	14.3		28.0	20	4 49	16	39	4	05 67	17 45	45
11	343	41.5	+15	11.2	0	38.8	+22	16.9	10 N	5 03	5 29	5 51	4	25 62	17 27	51
12	358	41.6	+15	10.4	15	03.4	+22	05.7	0	5 15	5 40	6 02	4	43 58	17 11	56
13	13	41.7		09.7	29	28.2	+21	54.4	10 S	26	5 51	13	5	01 54	16 55	60
14	28	41.8		08.9	43	53.0		42.9	20	35	6 02	24		21 49	37	65
15	43	41.9		08.2	58	18.0		31.3	30	44	13	37		43 44	17	71
16	58	42.0		07.4	72	43.0		19.6	35	49	19	45	5	56 40	16 05	74
17	73	42.1	+15	06.7	87	08.2	+21	07.7	40	5 53	6 25	6 53	6	11 37	15 51	79
18	88	42.2	+15	06.0	101	33.5	+20	55.7	45	5 58	6 33	7 03	6	29 32	15 35	83
19	103	42.3		05.2	115	58.9		43.5	50	6 03	41	15	6	51 25	14	90
20	118	42.4		04.5	130	24.4		31.3	52	05	45	21	7	01 23	15 05	92
21	133	42.5		03.7	144	50.1		18.9	54	07	49	27		13 19	14 53	97
22	148	42.6		03.0	159	15.8	+20	06.4	56	10	54	34		26 15	41	101
23	163	42.7		02.2	173	41.7	+19	53.7	58	12	6 59	41	7	41 10	26	107
24	178	42.9	+15	01.5	188	07.7	+19	41.0	60 S	6 15	7 04	7 50	8	00 3	14 09	113

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 41.6 ^m		Mag: -4.4 PMG: 14 ^h 56 ^m		Mag: +1.3 PMG: 8 ^h 41 ^m		Mag: -1.8 PMG: 11 ^h 28 ^m		Mag: +0.6 PMG: 3 ^h 39 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	319	28.6	136	00.6	-2	32.7	229	44.0	+23	40.1	187	44.2	+18	26.1	305	04.9	+3	21.9
1	334	31.1	151	00.9		33.9	244	44.7		40.1	202	46.1		26.0	320	07.4		21.9
2	349	33.6	166	01.2		35.1	259	45.3		40.2	217	48.0		25.9	335	10.0		21.9
3	4	36.0	181	01.5		36.3	274	46.0		40.2	232	49.9		25.7	350	12.5		21.8
4	19	38.5	196	01.8		37.5	289	46.6		40.2	247	51.8		25.6	5	15.0		21.8
5	34	40.9	211	02.1	-2	38.7	304	47.3	+23	40.3	262	53.7	+18	25.4	20	17.5	+3	21.8
6	49	43.4	226	02.4	-2	39.9	319	47.9	+23	40.3	277	55.6	+18	25.3	35	20.0	+3	21.7
7	64	45.9	241	02.7		41.1	334	48.6		40.3	292	57.5		25.1	50	22.6		21.7
8	79	48.3	256	03.0		42.3	349	49.3		40.4	307	59.4		25.0	65	25.1		21.7
9	94	50.8	271	03.3		43.6	4	49.9		40.4	323	01.3		24.9	80	27.6		21.6
10	109	53.3	286	03.7		44.8	19	50.6		40.4	338	03.2		24.7	95	30.1		21.6
11	124	55.7	301	04.0	-2	46.0	34	51.2	+23	40.5	353	05.1	+18	24.6	110	32.6	+3	21.6
12	139	58.2	316	04.3	-2	47.2	49	51.9	+23	40.5	8	07.0	+18	24.4	125	35.2	+3	21.5
13	155	00.7	331	04.6		48.4	64	52.5		40.5	23	08.9		24.3	140	37.7		21.5
14	170	03.1	346	04.9		49.6	79	53.2		40.6	38	10.8		24.2	155	40.2		21.5
15	185	05.6	1	05.2		50.8	94	53.8		40.6	53	12.7		24.0	170	42.7		21.4
16	200	08.0	16	05.5		52.0	109	54.5		40.6	68	14.6		23.9	185	45.2		21.4
17	215	10.5	31	05.8	-2	53.2	124	55.2	+23	40.7	83	16.5	+18	23.7	200	47.8	+3	21.3
18	230	13.0	46	06.1	-2	54.5	139	55.8	+23	40.7	98	18.4	+18	23.6	215	50.3	+3	21.3
19	245	15.4	61	06.4		55.7	154	56.5		40.7	113	20.3		23.4	230	52.8		21.3
20	260	17.9	76	06.7		56.9	169	57.1		40.8	128	22.2		23.3	245	55.3		21.2
21	275	20.4	91	07.1		58.1	184	57.8		40.8	143	24.2		23.2	260	57.8		21.2
22	290	22.8	106	07.4	-2	59.3	199	58.4		40.8	158	26.1		23.0	276	00.4		21.2
23	305	25.3	121	07.7	-3	00.5	214	59.1		40.9	173	28.0		22.9	291	02.9		21.1
24	320	27.8	136	08.0	-3	01.7	229	59.7	+23	40.9	188	29.9	+18	22.7	306	05.4	+3	21.1
Dif	—		+3		-12		+7		0		+19		-1		+25		0	

UT	SOL				● LUNA							Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna														
	SD: 15'8 PMG:12 ^h 05.1 ^m				Edad: 28.6 ^d SD: 16'4 PMG: 11 ^h 54 ^m																											
					PHE { 4 ^h : 60'0 12 ^h : 59'9 20 ^h : 59'7 R°: 53 ^m																											
	hG ☉		Dec		hG ☾		Dif		Dec		Dif				Civil	Náutico	Hora	R°	Hora	R°												
h	°	'	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m													
0	178	42.9	+15	01.5	188	07.7	71	+19	41.0	129	60 N	20 02	20 54	22 14	3 10	110	20 01	2														
1	193	43.0	+15	00.7	202	33.8	72		28.1	130	58	19 52	40	21 48	23 105	19 52	6															
2	208	43.1	+15	00.0	217	00.0	73		15.1	131	56	44	28	28	35 100	44	10															
3	223	43.2	+14	59.2	231	26.3	75	+19	02.0	132	54	36	18	21 12	45 96	37	13															
4	238	43.3		58.5	245	52.8	75	+18	48.8	132	52	30	08	20 58	3 54	92	30	17														
5	253	43.4	+14	57.7	260	19.3	75	+18	35.5	133	50	19 24	20 00	20 47	4 02	89	19 25	18														
6	268	43.5	+14	57.0	274	46.0	77	+18	22.1	134	45	19 11	19 43	20 23	4 19	83	19 12	24														
7	283	43.6		56.2	289	12.8	78	+18	08.6	135	40	19 01	30	20 06	33 78	19 01	29															
8	298	43.7		55.4	303	39.7	79	+17	54.9	137	35	18 52	19	19 51	44 74	18 52	33															
9	313	43.8		54.7	318	06.7	80		41.2	137	30	44	19 09	39	4 54	71	44	37														
10	328	43.9		53.9	332	33.8	81		27.4	138	20	31	18 54	21	5 12	64	30	43														
11	343	44.0	+14	53.2	347	01.0	82	+17	13.5	139	10 N	18 19	18 41	19 06	5 27	59	18 18	48														
12	358	44.1	+14	52.4	1	28.4	84	+16	59.5	140	0	18 08	18 30	18 55	5 41	54	18 07	52														
13	13	44.2		51.7	15	55.8	84		45.4	141	10 S	17 58	20	45	5 55	49	17 55	57														
14	28	44.3		50.9	30	23.4	86		31.2	142	20	47	18 09	36	6 10	44	42	63														
15	43	44.4		50.2	44	51.1	87		16.9	143	30	34	17 59	27	27 38	28	68															
16	58	44.5		49.4	59	18.8	87	+16	02.5	144	35	27	53	23	36 36	19	73															
17	73	44.6	+14	48.7	73	46.7	89	+15	48.1	144	40	17 18	17 47	18 19	6 48	31	17 10	76														
18	88	44.8	+14	47.9	88	14.7	90	+15	33.6	145	45	17 09	17 39	18 14	7 01	26	16 58	81														
19	103	44.9		47.1	102	42.8	91		19.0	146	50	16 57	31	10	16 21	44	88															
20	118	45.0		46.4	117	11.0	92	+15	04.3	147	52	52	28	08	24 18	37	91															
21	133	45.1		45.6	131	39.3	93	+14	49.5	148	54	46	24	06	32 15	30	94															
22	148	45.2		44.9	146	07.8	95		34.7	148	56	39	19	03	41 11	22	97															
23	163	45.3		44.1	160	36.3	95		19.8	149	58	32	14	18 01	7 51	8	13 101															
24	178	45.4	+14	43.3	175	04.9	96	+14	04.9	149	60 S	16 24	17 09	17 59	8 03	3	16 02	107														
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO															
	PMG 2 ^h 37.7 ^m				Mag: -4.4 PMG: 14 ^h 55 ^m				Mag: +1.3 PMG: 8 ^h 40 ^m				Mag: -1.8 PMG: 11 ^h 25 ^m				Mag: +0.6 PMG: 3 ^h 35 ^m															
	hG ♈				hG ♀				hG ♂				hG ♃				hG ♄															
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'												
0	320	27.8	136	08.0	-3	01.7	229	59.7	+23	40.9	188	29.9	+18	22.7	306	05.4	+3	21.1														
1	335	30.2	151	08.3		02.9	245	00.4		40.9	203	31.8		22.6	321	07.9		21.1														
2	350	32.7	166	08.6		04.1	260	01.1		40.9	218	33.7		22.4	336	10.5		21.0														
3	5	35.2	181	09.0		05.3	275	01.7		41.0	233	35.6		22.3	351	13.0		21.0														
4	20	37.6	196	09.3		06.5	290	02.4		41.0	248	37.5		22.2	6	15.5		21.0														
5	35	40.1	211	09.6	-3	07.8	305	03.0	+23	41.0	263	39.4	+18	22.0	21	18.0	+3	20.9														
6	50	42.5	226	09.9	-3	09.0	320	03.7	+23	41.1	278	41.3	+18	21.9	36	20.6	+3	20.9														
7	65	45.0	241	10.2		10.2	335	04.3		41.1	293	43.2		21.7	51	23.1		20.8														
8	80	47.5	256	10.5		11.4	350	05.0		41.1	308	45.1		21.6	66	25.6		20.8														
9	95	49.9	271	10.9		12.6	5	05.7		41.1	323	47.0		21.5	81	28.1		20.8														
10	110	52.4	286	11.2		13.8	20	06.3		41.2	338	48.9		21.3	96	30.7		20.7														
11	125	54.9	301	11.5	-3	15.0	35	07.0	+23	41.2	353	50.8	+18	21.2	111	33.2	+3	20.7														
12	140	57.3	316	11.8	-3	16.2	50	07.6	+23	41.2	8	52.7	+18	21.0	126	35.7	+3	20.7														
13	155	59.8	331	12.2		17.4	65	08.3		41.2	23	54.6		20.9	141	38.2		20.6														
14	171	02.3	346	12.5		18.6	80	09.0		41.3	38	56.5		20.7	156	40.7		20.6														
15	186	04.7	1	12.8		19.8	95	09.6		41.3	53	58.5		20.6	171	43.3		20.5														
16	201	07.2	16	13.1		21.0	110	10.3		41.3	69	00.4		20.5	186	45.8		20.5														
17	216	09.7	31	13.4	-3	22.2	125	10.9	+23	41.3	84	02.3	+18	20.3	201	48.3	+3	20.5														
18	231	12.1	46	13.8	-3	23.4	140	11.6	+23	41.4	99	04.2	+18	20.2	216	50.9	+3	20.4														
19	246	14.6	61	14.1		24.7	155	12.2		41.4	114	06.1		20.0	231	53.4		20.4														
20	261	17.0	76	14.4		25.9	170	12.9		41.4	129	08.0		19.9	246	55.9		20.4														
21	276	19.5	91	14.8		27.1	185	13.6		41.4	144	09.9		19.7	261	58.4		20.3														
22	291	22.0	106	15.1		28.3	200	14.2		41.5	159	11.8		19.6	277	01.0		20.3														
23	306	24.4	121	15.4		29.5	215	14.9		41.5	174	13.7		19.5	292	03.5		20.2														
24	321	26.9	136	15.7	-3	30.7	230	15.5	+23	41.5	189	15.6	+18	19.3	307	06.0	+3	20.2														
Dif	—				+3				-12				+7				0				+19				-1				+25			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15 ^h 8 PMG:12 ^h 04.9 ^m				Edad: 0.3 ^d SD: 16 ^h 2 PMG: 12 ^h 46 ^m																
	PHE { 4 ^h : 59 ^h 5 12 ^h : 59 ^h 3 20 ^h : 59 ^h 1 Rº: 48 ^m				hG ☉	Dec	hG ☾	Dif		Dec	Dif		Náutico	Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	178	45.4	+14	43.3	175	04.9	+14	04.9	60 N	1	56	3	17	4	09	4	58	102	20	02	0
1	193	45.5		42.6	189	33.6	+13	49.8	58	2	23		31	19		5	06	97	19	57	4
2	208	45.6		41.8	204	02.4		34.7	56		42		43	27		13	93		53	7	
3	223	45.7		41.1	218	31.4		19.6	54	2	59	3	53	34		19	90		49	10	
4	238	45.8		40.3	233	00.4	+13	04.4	52	3	12	4	02	41		25	86		45	13	
5	253	46.0	+14	39.5	247	29.5	+12	49.1	50	3	24	4	10	4	47	5	30	84	19	42	15
6	268	46.1	+14	38.8	261	58.7	+12	33.8	45	3	47	4	27	4	59	5	40	78	19	35	20
7	283	46.2		38.0	276	28.0		18.4	40	4	05		40	5	10	49	73		29	24	
8	298	46.3		37.3	290	57.4	+12	02.9	35		19	4	51	18		5	57	69	24	28	
9	313	46.4		36.5	305	26.9	+11	47.4	30		31	5	01	26		6	03	66	19	32	
10	328	46.5		35.7	319	56.5		31.9	20	4	49		16	39		15	59		11	38	
11	343	46.6	+14	35.0	334	26.2	+11	16.3	10 N	5	04	5	29	5	51	6	25	54	19	04	43
12	358	46.7	+14	34.2	348	56.0	+11	00.7	0	5	15	5	40	6	01	6	34	49	18	58	47
13	13	46.8		33.4	3	25.9	+10	45.0	10 S		25		50	12		43	44		51	52	
14	28	47.0		32.7	17	55.8		29.3	20		34	6	00	23		6	53	39	43	58	
15	43	47.1		31.9	32	25.8	+10	13.5	30		43		11	36		7	04	33	35	64	
16	58	47.2		31.1	46	56.0	+9	57.8	35		47		17	43		10	30		30	68	
17	73	47.3	+14	30.4	61	26.2	+9	41.9	40	5	51	6	23	6	51	7	17	26	18	25	71
18	88	47.4	+14	29.6	75	56.5	+9	26.1	45	5	55	6	30	7	00	7	26	21	18	18	76
19	103	47.5		28.8	90	26.8	+9	10.2	50	6	00		38	12		36	16		10	82	
20	118	47.6		28.1	104	57.3	+8	54.2	52		02		41	17		40	14		06	85	
21	133	47.7		27.3	119	27.8		38.3	54		04		45	23		46	10		18	02	88
22	148	47.9		26.5	133	58.4		22.3	56		06		50	29		51	7		17	58	91
23	163	48.0		25.8	148	29.1	+8	06.3	58		08	6	54	37		7	57	4		53	94
24	178	48.1	+14	25.0	162	59.9	+7	50.3	60 S	6	10	7	00	7	45	8	04	0	17	47	99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 33.8 ^m		Mag: -4.4 PMG: 14 ^h 55 ^m		Mag: +1.3 PMG: 8 ^h 39 ^m		Mag: -1.8 PMG: 11 ^h 22 ^m		Mag: +0.6 PMG: 3 ^h 31 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	321	26.9	136	15.7	-3	30.7	230	15.5	+23	41.5	189	15.6	+18	19.3	307	06.0	+3	20.2
1	336	29.4	151	16.1		31.9	245	16.2		41.5	204	17.5		19.2	322	08.5		20.2
2	351	31.8	166	16.4		33.1	260	16.9		41.5	219	19.4		19.0	337	11.1		20.1
3	6	34.3	181	16.7		34.3	275	17.5		41.6	234	21.3		18.9	352	13.6		20.1
4	21	36.8	196	17.1		35.5	290	18.2		41.6	249	23.2		18.7	7	16.1		20.1
5	36	39.2	211	17.4	-3	36.7	305	18.8	+23	41.6	264	25.1	+18	18.6	22	18.6	+3	20.0
6	51	41.7	226	17.7	-3	37.9	320	19.5	+23	41.6	279	27.0	+18	18.5	37	21.2	+3	20.0
7	66	44.2	241	18.1		39.1	335	20.2		41.6	294	29.0		18.3	52	23.7		19.9
8	81	46.6	256	18.4		40.3	350	20.8		41.7	309	30.9		18.2	67	26.2		19.9
9	96	49.1	271	18.7		41.5	5	21.5		41.7	324	32.8		18.0	82	28.8		19.9
10	111	51.5	286	19.1		42.7	20	22.2		41.7	339	34.7		17.9	97	31.3		19.8
11	126	54.0	301	19.4	-3	43.9	35	22.8	+23	41.7	354	36.6	+18	17.7	112	33.8	+3	19.8
12	141	56.5	316	19.7	-3	45.1	50	23.5	+23	41.7	9	38.5	+18	17.6	127	36.3	+3	19.8
13	156	58.9	331	20.1		46.3	65	24.1		41.8	24	40.4		17.5	142	38.9		19.7
14	172	01.4	346	20.4		47.5	80	24.8		41.8	39	42.3		17.3	157	41.4		19.7
15	187	03.9	1	20.7		48.7	95	25.5		41.8	54	44.2		17.2	172	43.9		19.6
16	202	06.3	16	21.1		49.9	110	26.1		41.8	69	46.1		17.0	187	46.5		19.6
17	217	08.8	31	21.4	-3	51.1	125	26.8	+23	41.8	84	48.0	+18	16.9	202	49.0	+3	19.6
18	232	11.3	46	21.8	-3	52.3	140	27.5	+23	41.8	99	49.9	+18	16.7	217	51.5	+3	19.5
19	247	13.7	61	22.1		53.5	155	28.1		41.8	114	51.8		16.6	232	54.0		19.5
20	262	16.2	76	22.4		54.7	170	28.8		41.9	129	53.7		16.5	247	56.6		19.4
21	277	18.6	91	22.8		55.9	185	29.4		41.9	144	55.6		16.3	262	59.1		19.4
22	292	21.1	106	23.1		57.1	200	30.1		41.9	159	57.6		16.2	278	01.6		19.4
23	307	23.6	121	23.5		58.3	215	30.8		41.9	174	59.5		16.0	293	04.2		19.3
24	322	26.0	136	23.8	-3	59.5	230	31.4	+23	41.9	190	01.4	+18	15.9	308	06.7	+3	19.3
Dif	—		+3		-12		+7		0		+19		-1		+25			

UT	SOL			● LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG:12 ^h 04.7 ^m			Edad: 1.3 ^d PHE { 4 ^h : 58'8 12 ^h : 58'6 20 ^h : 58'3 R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178 48.1	+14 25.0	162 59.9	118	+7 50.3	161	60 N	19 56	20 47	22 04	6 40	97	20 02	1	
1	193 48.2	24.2	177 30.7	120	34.2	160	58	47	34	21 40	43 93	01 4			
2	208 48.3	23.5	192 01.7	120	18.2	161	56	39	23	21	46 90	20 00	7		
3	223 48.4	22.7	206 32.7	120	+7 02.1	161	54	32	13	21 06	49 87	19 59	10		
4	238 48.6	21.9	221 03.7	120	+6 46.0	161	52	26	20 04	20 53	51 84	58 12			
5	253 48.7	+14 21.1	235 34.8	121	+6 29.8	162	50	19 20	19 56	20 42	6 54	81	19 57	15	
6	268 48.8	+14 20.4	250 06.0	122	+6 13.7	161	45	19 08	19 40	20 20	6 58	76	19 55	20	
7	283 48.9	19.6	264 37.3	123	+5 57.5	162	40	18 58	27 20	02	7 02	71	53	25	
8	298 49.0	18.8	279 08.6	123	41.4	161	35	50	16	19 49	06 67	52 28			
9	313 49.1	18.1	293 40.0	124	25.2	162	30	42	19 07	37	09 63	51 31			
10	328 49.3	17.3	308 11.5	125	+5 09.0	162	20	29	18 52	19	14 58	49 37			
11	343 49.4	+14 16.5	322 43.0	125	+4 52.8	162	10 N	18 18	18 40	19 05	7 19	52	19 47	42	
12	358 49.5	+14 15.7	337 14.6	126	+4 36.7	161	0	18 08	18 29	18 54	7 23	47	19 45	47	
13	13 49.6	15.0	351 46.2	126	20.5	162	10 S	17 58	20	45	27 43	43 52			
14	28 49.7	14.2	6 17.9	127	+4 04.3	162	20	47	10	36	32 37	41 57			
15	43 49.8	13.4	20 49.7	128	+3 48.1	162	30	35	18 00	28	37 32	39 63			
16	58 50.0	12.6	35 21.5	128	31.9	162	35	28	17 54	24	40 28	38 66			
17	73 50.1	+14 11.9	49 53.4	129	+3 15.7	162	40	17 20	17 48	18 20	7 43	25	19 36	70	
18	88 50.2	+14 11.1	64 25.3	129	+2 59.5	162	45	17 11	17 42	18 16	7 47	20	19 34	75	
19	103 50.3	10.3	78 57.3	130	43.3	162	50	17 00	34	12	52 15	32 80			
20	118 50.4	09.5	93 29.3	130	27.1	162	52	16 55	30	10	54 13	31 82			
21	133 50.6	08.8	108 01.4	131	+2 11.0	161	54	49	27	09	56 10	30 85			
22	148 50.7	08.0	122 33.5	131	+1 54.8	162	56	43	23	07	7 58	8	29 88		
23	163 50.8	07.2	137 05.7	132	38.7	161	58	36	18	05	8 01	5	27 92		
24	178 50.9	+14 06.4	151 37.9	132	+1 22.5	162	60 S	16 28	17 13	18 03	8 04	1	19 26	95	
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG 2 ^h 29.9 ^m		Mag: -4.4 PMG: 14 ^h 54 ^m		Mag: +1.3 PMG: 8 ^h 38 ^m		Mag: -1.8 PMG: 11 ^h 18 ^m		Mag: +0.6 PMG: 3 ^h 27 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♏	Dec	hG ♏	Dec	hG ♏	Dec				
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /				
0	322 26.0	136 23.8	-3 59.5	230 31.4	+23 41.9	190 01.4	+18 15.9	308 06.7	+3 19.3						
1	337 28.5	151 24.2	-4 00.7	245 32.1	41.9	205 03.3	15.7	323 09.2	19.3						
2	352 31.0	166 24.5	01.9	260 32.8	41.9	220 05.2	15.6	338 11.8	19.2						
3	7 33.4	181 24.9	03.1	275 33.4	42.0	235 07.1	15.5	353 14.3	19.2						
4	22 35.9	196 25.2	04.3	290 34.1	42.0	250 09.0	15.3	8 16.8	19.1						
5	37 38.4	211 25.5	-4 05.5	305 34.7	+23 42.0	265 10.9	+18 15.2	23 19.3	+3 19.1						
6	52 40.8	226 25.9	-4 06.7	320 35.4	+23 42.0	280 12.8	+18 15.0	38 21.9	+3 19.1						
7	67 43.3	241 26.2	07.9	335 36.1	42.0	295 14.7	14.9	53 24.4	19.0						
8	82 45.8	256 26.6	09.1	350 36.7	42.0	310 16.6	14.7	68 26.9	19.0						
9	97 48.2	271 26.9	10.3	5 37.4	42.0	325 18.5	14.6	83 29.5	18.9						
10	112 50.7	286 27.3	11.5	20 38.1	42.0	340 20.4	14.5	98 32.0	18.9						
11	127 53.1	301 27.6	-4 12.7	35 38.7	+23 42.0	355 22.4	+18 14.3	113 34.5	+3 18.9						
12	142 55.6	316 28.0	-4 13.9	50 39.4	+23 42.1	10 24.3	+18 14.2	128 37.1	+3 18.8						
13	157 58.1	331 28.3	15.1	65 40.1	42.1	25 26.2	14.0	143 39.6	18.8						
14	173 00.5	346 28.7	16.3	80 40.7	42.1	40 28.1	13.9	158 42.1	18.7						
15	188 03.0	1 29.0	17.5	95 41.4	42.1	55 30.0	13.7	173 44.7	18.7						
16	203 05.5	16 29.4	18.7	110 42.1	42.1	70 31.9	13.6	188 47.2	18.7						
17	218 07.9	31 29.8	-4 19.9	125 42.7	+23 42.1	85 33.8	+18 13.5	203 49.7	+3 18.6						
18	233 10.4	46 30.1	-4 21.1	140 43.4	+23 42.1	100 35.7	+18 13.3	218 52.3	+3 18.6						
19	248 12.9	61 30.5	22.3	155 44.1	42.1	115 37.6	13.2	233 54.8	18.5						
20	263 15.3	76 30.8	23.5	170 44.7	42.1	130 39.5	13.0	248 57.3	18.5						
21	278 17.8	91 31.2	24.7	185 45.4	42.1	145 41.4	12.9	263 59.9	18.5						
22	293 20.2	106 31.5	25.9	200 46.1	42.1	160 43.3	12.7	279 02.4	18.4						
23	308 22.7	121 31.9	27.1	215 46.7	42.1	175 45.3	12.6	294 04.9	18.4						
24	323 25.2	136 32.3	-4 28.3	230 47.4	+23 42.1	190 47.2	+18 12.5	309 07.5	+3 18.3						
Dif	—	+4	-12	+7	0	+19	-1	+25	0						

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 04.5 ^m			Edad: 2.3 ^d SD: 15 ^h 8 PMG: 14 ^h 20 ^m												
				PHE { 4 ^h : 58'0 12 ^h : 57'7 20 ^h : 57'5 Rº: 44 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	50.9	+14	06.4	151	37.9	+1	22.5	60 N	2 06	3 23	4 14	8 16	92	20 02	**
1	193	51.0		05.6	166	10.1	+1	06.4	58	30	36	23	15	89	04	3
2	208	51.2		04.9	180	42.4	+0	50.3	56	2 49	47	31	15	85	06	6
3	223	51.3		04.1	195	14.8		34.2	54	3 04	3 57	38	14	83	07	10
4	238	51.4		03.3	209	47.2		18.2	52	17	4 06	44	14	79	09	12
5	253	51.5	+14	02.5	224	19.6	+0	02.1	50	3 28	4 13	4 50	8 13	78	20 11	13
6	268	51.6	+14	01.7	238	52.1	-0	13.9	45	3 50	4 30	5 02	8 13	72	20 14	19
7	283	51.8		01.0	253	24.6		29.9	40	4 07	42	12	12	67	16	23
8	298	51.9	+14	00.2	267	57.1	-0	45.9	35	21	4 53	20	11	64	19	26
9	313	52.0	+13	59.4	282	29.7	-1	01.9	30	32	5 02	27	11	60	21	29
10	328	52.1		58.6	297	02.3		17.8	20	4 50	17	40	10	55	24	35
11	343	52.3	+13	57.8	311	34.9	-1	33.7	10 N	5 04	5 29	5 51	8 10	49	20 27	40
12	358	52.4	+13	57.1	326	07.6	-1	49.6	0	5 15	5 40	6 01	8 09	45	20 30	45
13	13	52.5		56.3	340	40.3	-2	05.5	10 S	25	50	11	08	40	33	49
14	28	52.6		55.5	355	13.0		21.3	20	33	5 59	22	08	35	37	54
15	43	52.8		54.7	9	45.8		37.1	30	41	6 09	34	07	30	40	60
16	58	52.9		53.9	24	18.5	-2	52.9	35	45	15	41	07	26	42	63
17	73	53.0	+13	53.1	38	51.3	-3	08.6	40	5 48	6 20	6 48	8 06	23	20 45	66
18	88	53.1	+13	52.3	53	24.2	-3	24.3	45	5 52	6 27	6 57	8 06	18	20 47	71
19	103	53.3		51.6	67	57.0		39.9	50	56	34	7 08	05	14	51	76
20	118	53.4		50.8	82	29.9	-3	55.6	52	5 58	38	13	05	11	52	79
21	133	53.5		50.0	97	02.8	-4	11.2	54	6 00	41	19	05	9	54	81
22	148	53.6		49.2	111	35.7		26.7	56	02	45	25	05	6	56	84
23	163	53.8		48.4	126	08.6		42.2	58	04	50	32	04	3	20 58	88
24	178	53.9	+13	47.6	140	41.6	-4	57.7	60 S	6 06	6 55	7 39	8 04	0	21 00	92

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 25.9 ^m		Mag: -4.4 PMG: 14 ^h 53 ^m		Mag: +1.3 PMG: 8 ^h 36 ^m		Mag: -1.8 PMG: 11 ^h 15 ^m		Mag: +0.6 PMG: 3 ^h 23 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	323	25.2	136	32.3	-4	28.3	230	47.4	+23	42.1	190	47.2	+18	12.5	309	07.5	+3	18.3
1	338	27.6	151	32.6		29.5	245	48.1		42.1	205	49.1		12.3	324	10.0		18.3
2	353	30.1	166	33.0		30.7	260	48.7		42.2	220	51.0		12.2	339	12.5		18.3
3	8	32.6	181	33.3		31.9	275	49.4		42.2	235	52.9		12.0	354	15.1		18.2
4	23	35.0	196	33.7		33.1	290	50.1		42.2	250	54.8		11.9	9	17.6		18.2
5	38	37.5	211	34.1	-4	34.3	305	50.7	+23	42.2	265	56.7	+18	11.7	24	20.1	+3	18.1
6	53	40.0	226	34.4	-4	35.5	320	51.4	+23	42.2	280	58.6	+18	11.6	39	22.7	+3	18.1
7	68	42.4	241	34.8		36.7	335	52.1		42.2	296	00.5		11.5	54	25.2		18.0
8	83	44.9	256	35.1		37.9	350	52.7		42.2	311	02.4		11.3	69	27.7		18.0
9	98	47.4	271	35.5		39.0	5	53.4		42.2	326	04.3		11.2	84	30.3		18.0
10	113	49.8	286	35.9		40.2	20	54.1		42.2	341	06.3		11.0	99	32.8		17.9
11	128	52.3	301	36.2	-4	41.4	35	54.7	+23	42.2	356	08.2	+18	10.9	114	35.3	+3	17.9
12	143	54.7	316	36.6	-4	42.6	50	55.4	+23	42.2	11	10.1	+18	10.7	129	37.9	+3	17.8
13	158	57.2	331	37.0		43.8	65	56.1		42.2	26	12.0		10.6	144	40.4		17.8
14	173	59.7	346	37.3		45.0	80	56.8		42.2	41	13.9		10.4	159	43.0		17.8
15	189	02.1	1	37.7		46.2	95	57.4		42.2	56	15.8		10.3	174	45.5		17.7
16	204	04.6	16	38.1		47.4	110	58.1		42.2	71	17.7		10.2	189	48.0		17.7
17	219	07.1	31	38.5	-4	48.6	125	58.8	+23	42.2	86	19.6	+18	10.0	204	50.6	+3	17.6
18	234	09.5	46	38.8	-4	49.8	140	59.4	+23	42.2	101	21.5	+18	09.9	219	53.1	+3	17.6
19	249	12.0	61	39.2		51.0	156	00.1		42.2	116	23.4		09.7	234	55.6		17.6
20	264	14.5	76	39.6		52.2	171	00.8		42.2	131	25.3		09.6	249	58.2		17.5
21	279	16.9	91	39.9		53.4	186	01.4		42.2	146	27.3		09.4	265	00.7		17.5
22	294	19.4	106	40.3		54.5	201	02.1		42.2	161	29.2		09.3	280	03.2		17.4
23	309	21.8	121	40.7		55.7	216	02.8		42.2	176	31.1		09.2	295	05.8		17.4
24	324	24.3	136	41.1	-4	56.9	231	03.5	+23	42.2	191	33.0	+18	09.0	310	08.3	+3	17.3
Dif	—		+4		-12		+7		0		+19		-1		+25		0	

UT	SOL		LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG:12 ^h 04.3 ^m		Edad: 3.3 ^d SD: 15/6 PMG: 15 ^h 04 ^m		PHE { 4 ^h : 57/2 12 ^h : 56/9 20 ^h : 56/6 R°: 46 ^m									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	53.9	+13	47.6	140	41.6	60 N	19 50	20 41	21 54	9 48	94	20 01 2	
1	193	54.0		46.8	155	14.5 ¹³⁹	58	42	28	32	44	89	07 6	
2	208	54.1		46.0	169	47.5 ¹⁴⁰	56	34	17	15	40	86	12 9	
3	223	54.3		45.3	184	20.5 ¹⁴⁰	54	28	08	21 00	37	82	17 11	
4	238	54.4		44.5	198	53.5 ¹⁴⁰	52	22	20 00	20 48	33	80	21 14	
5	253	54.5	+13	43.7	213	26.5 ¹⁴⁰	50	19 17	19 52	20 37	9 31	77	20 24 17	
6	268	54.6	+13	42.9	227	59.5 ¹⁴⁰	45	19 05	19 37	20 16	9 25	71	20 33 21	
7	283	54.8		42.1	242	32.5 ¹⁴⁰	40	18 55	24	19 59	19	68	39 26	
8	298	54.9		41.3	257	05.6 ¹⁴¹	35	47	14	46	15	64	45 29	
9	313	55.0		40.5	271	38.6 ¹⁴⁰	30	40	19 05	35	11	61	50 33	
10	328	55.2		39.7	286	11.7 ¹⁴¹	20	28	18 51	18	9 05	55	20 59 38	
11	343	55.3	+13	38.9	300	44.7 ¹⁴⁰	10 N	18 17	18 39	19 04	8 59	50	21 07 42	
12	358	55.4	+13	38.1	315	17.8 ¹⁴¹	0	18 08	18 29	18 54	8 54	46	21 15 46	
13	13	55.5		37.3	329	50.8 ¹⁴⁰	10 S	17 58	20	44	48	42	22 51	
14	28	55.7		36.6	344	23.9 ¹⁴¹	20	48	10	36	43	37	31 55	
15	43	55.8		35.8	358	56.9 ¹⁴⁰	30	36	18 01	29	37	31	40 60	
16	58	55.9		35.0	13	30.0 ¹⁴¹	35	30	17 56	25	33	28	45 64	
17	73	56.1	+13	34.2	28	03.1 ¹⁴¹	40	17 22	17 50	18 22	8 29	25	21 51 68	
18	88	56.2	+13	33.4	42	36.1 ¹⁴⁰	45	17 13	17 44	18 18	8 24	21	21 58 72	
19	103	56.3		32.6	57	09.2 ¹⁴¹	50	17 03	37	15	19	16	22 07 77	
20	118	56.5		31.8	71	42.2 ¹⁴⁰	52	16 58	33	13	16	14	11 79	
21	133	56.6		31.0	86	15.2 ¹⁴⁰	54	53	30	12	14	11	15 83	
22	148	56.7		30.2	100	48.3 ¹⁴¹	56	47	26	10	11	8	20 86	
23	163	56.9		29.4	115	21.3 ¹⁴⁰	58	40	22	08	07	5	26 89	
24	178	57.0	+13	28.6	129	54.3 ¹⁴⁰	60 S	16 33	17 17	18 07	8 04	1	22 32 94	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 2 ^h 22.0 ^m		Mag: -4.4 PMG: 14 ^h 53 ^m		Mag: +1.3 PMG: 8 ^h 35 ^m		Mag: -1.8 PMG: 11 ^h 12 ^m		Mag: +0.6 PMG: 3 ^h 19 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	324	24.3	136	41.1	-4	56.9	231	03.5	+23	42.2	191	33.0	+18	09.0	310	08.3	+3	17.3
1	339	26.8	151	41.4		58.1	246	04.1		42.2	206	34.9		08.9	325	10.9		17.3
2	354	29.2	166	41.8	-4	59.3	261	04.8		42.2	221	36.8		08.7	340	13.4		17.3
3	9	31.7	181	42.2	-5	00.5	276	05.5		42.2	236	38.7		08.6	355	15.9		17.2
4	24	34.2	196	42.6		01.7	291	06.1		42.2	251	40.6		08.4	10	18.5		17.2
5	39	36.6	211	42.9	-5	02.9	306	06.8	+23	42.2	266	42.5	+18	08.3	25	21.0	+3	17.1
6	54	39.1	226	43.3	-5	04.1	321	07.5	+23	42.2	281	44.4	+18	08.1	40	23.6	+3	17.1
7	69	41.6	241	43.7		05.3	336	08.2		42.1	296	46.4		08.0	55	26.1		17.0
8	84	44.0	256	44.1		06.4	351	08.8		42.1	311	48.3		07.9	70	28.6		17.0
9	99	46.5	271	44.5		07.6	6	09.5		42.1	326	50.2		07.7	85	31.2		17.0
10	114	49.0	286	44.8		08.8	21	10.2		42.1	341	52.1		07.6	100	33.7		16.9
11	129	51.4	301	45.2	-5	10.0	36	10.8	+23	42.1	356	54.0	+18	07.4	115	36.2	+3	16.9
12	144	53.9	316	45.6	-5	11.2	51	11.5	+23	42.1	11	55.9	+18	07.3	130	38.8	+3	16.8
13	159	56.3	331	46.0		12.4	66	12.2		42.1	26	57.8		07.1	145	41.3		16.8
14	174	58.8	346	46.4		13.6	81	12.9		42.1	41	59.7		07.0	160	43.9		16.8
15	190	01.3	1	46.7		14.8	96	13.5		42.1	57	01.6		06.9	175	46.4		16.7
16	205	03.7	16	47.1		15.9	111	14.2		42.1	72	03.5		06.7	190	48.9		16.7
17	220	06.2	31	47.5	-5	17.1	126	14.9	+23	42.1	87	05.5	+18	06.6	205	51.5	+3	16.6
18	235	08.7	46	47.9	-5	18.3	141	15.6	+23	42.1	102	07.4	+18	06.4	220	54.0	+3	16.6
19	250	11.1	61	48.3		19.5	156	16.2		42.1	117	09.3		06.3	235	56.6		16.5
20	265	13.6	76	48.7		20.7	171	16.9		42.1	132	11.2		06.1	250	59.1		16.5
21	280	16.1	91	49.1		21.9	186	17.6		42.0	147	13.1		06.0	266	01.6		16.5
22	295	18.5	106	49.5		23.1	201	18.3		42.0	162	15.0		05.8	281	04.2		16.4
23	310	21.0	121	49.8		24.2	216	18.9		42.0	177	16.9		05.7	296	06.7		16.4
24	325	23.5	136	50.2	-5	25.4	231	19.6	+23	42.0	192	18.8	+18	05.6	311	09.3	+3	16.3
Dif	—		+4		-12		+7		0		+19		-1		+25		0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 04.1 ^m				Edad: 4.3 ^d SD: 15 ^h 4 PMG: 15 ^h 49 ^m														PHE { 4 ^h : 56 ^h 4 12 ^h : 56 ^h 1 20 ^h : 55 ^h 9 R°: 46 ^m
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	178	57.0	+13	28.6	129	54.3		-10	54.0		142	60 N	2 15	3 28	4 19	11 20	93	20 02	1
1	193	57.1		27.8	144	27.3	140	-11	08.2		140	58	37	41	27	12 88		11 6	
2	208	57.2		27.0	159	00.3	140		22.2		140	56	2 54	3 52	35	11 04	84	19 10	
3	223	57.4		26.2	173	33.3	140		36.2		140	54	3 09	4 01	41	10 58	80	27 13	
4	238	57.5		25.4	188	06.2	139	-11	50.1		139	52	21	09	47	52 77		34 15	
5	253	57.6	+13	24.6	202	39.2	140	-12	04.0		139	50	3 32	4 17	4 53	10 46	75	20 40	18
6	268	57.8	+13	23.8	217	12.1	139	-12	17.8		138	45	3 53	4 32	5 04	10 35	70	20 53	23
7	283	57.9		23.0	231	45.1	140		31.5		137	40	4 10	45	13	26 65		21 04	27
8	298	58.0		22.2	246	18.0	139		45.2		137	35	23	4 55	21	18 61		13 30	
9	313	58.2		21.4	260	50.9	139	-12	58.8		136	30	34	5 03	29	10 11	58	21 34	
10	328	58.3		20.6	275	23.7	138	-13	12.3		135	20	4 51	18	41	9 58	54	35 39	
11	343	58.4	+13	19.8	289	56.6	139	-13	25.7		134	10 N	5 04	5 29	5 51	9 48	49	21 48	42
12	358	58.6	+13	19.0	304	29.4	138	-13	39.1		134	0	5 15	5 39	6 01	9 38	45	22 00	46
13	13	58.7		18.2	319	02.2	138	-13	52.4		133	10 S	24	49	10	29 41		12 49	
14	28	58.9		17.4	333	35.0	138	-14	05.6		132	20	32	5 58	20	18 37		24 54	
15	43	59.0		16.6	348	07.8	138		18.7		131	30	39	6 07	32	07 32		39 59	
16	58	59.1		15.8	2	40.5	137		31.8		131	35	43	12	38	9 00	29	47 62	
17	73	59.3	+13	15.0	17	13.2	137	-14	44.7		129	40	5 46	6 18	6 46	8 53	25	22 57	65
18	88	59.4	+13	14.2	31	45.9	137	-14	57.7		130	45	5 49	6 24	6 54	8 44	21	23 09	69
19	103	59.5		13.4	46	18.6	137	-15	10.5		128	50	53	31	7 04	33 17		22 75	
20	118	59.7		12.6	60	51.3	137		23.2		127	52	54	34	09	28 15		29 77	
21	133	59.8		11.8	75	23.9	136		35.9		127	54	56	37	14	23 12		36 80	
22	148	59.9		11.0	89	56.5	136	-15	48.5		126	56	57	41	20	17 9		44 84	
23	164	00.1		10.2	104	29.0	135	-16	01.0		125	58	5 59	45	27	11 5	23 54	87	
24	179	00.2	+13	09.4	119	01.6	136	-16	13.4		124	60 S	6 01	6 50	7 34	8 04	0	** ** *	**

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 2 ^h 18.1 ^m			Mag: -4.5 PMG: 14 ^h 52 ^m			Mag: +1.3 PMG: 8 ^h 34 ^m			Mag: -1.8 PMG: 11 ^h 09 ^m			Mag: +0.5 PMG: 3 ^h 15 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	325	23.5	136	50.2	-5	25.4	231	19.6	+23	42.0	192	18.8	+18	05.6	311	09.3		
1	340	25.9	151	50.6		26.6	246	20.3		42.0	207	20.7		05.4	326	11.8		
2	355	28.4	166	51.0		27.8	261	20.9		42.0	222	22.7		05.3	341	14.4		
3	10	30.8	181	51.4		29.0	276	21.6		42.0	237	24.6		05.1	356	16.9		
4	25	33.3	196	51.8		30.2	291	22.3		42.0	252	26.5		05.0	11	19.4		
5	40	35.8	211	52.2	-5	31.3	306	23.0	+23	42.0	267	28.4	+18	04.8	26	22.0		
6	55	38.2	226	52.6	-5	32.5	321	23.7	+23	41.9	282	30.3	+18	04.7	41	24.5		
7	70	40.7	241	53.0		33.7	336	24.3		41.9	297	32.2		04.5	56	27.1		
8	85	43.2	256	53.4		34.9	351	25.0		41.9	312	34.1		04.4	71	29.6		
9	100	45.6	271	53.8		36.1	6	25.7		41.9	327	36.0		04.3	86	32.1		
10	115	48.1	286	54.2		37.3	21	26.4		41.9	342	37.9		04.1	101	34.7		
11	130	50.6	301	54.6	-5	38.4	36	27.0	+23	41.9	357	39.9	+18	04.0	116	37.2		
12	145	53.0	316	55.0	-5	39.6	51	27.7	+23	41.9	12	41.8	+18	03.8	131	39.8		
13	160	55.5	331	55.4		40.8	66	28.4		41.9	27	43.7		03.7	146	42.3		
14	175	57.9	346	55.8		42.0	81	29.1		41.8	42	45.6		03.5	161	44.9		
15	191	00.4	1	56.2		43.2	96	29.7		41.8	57	47.5		03.4	176	47.4		
16	206	02.9	16	56.6		44.3	111	30.4		41.8	72	49.4		03.3	191	50.0		
17	221	05.3	31	57.0	-5	45.5	126	31.1	+23	41.8	87	51.3	+18	03.1	206	52.5		
18	236	07.8	46	57.4	-5	46.7	141	31.8	+23	41.8	102	53.2	+18	03.0	221	55.0		
19	251	10.3	61	57.8		47.9	156	32.4		41.8	117	55.2		02.8	236	57.6		
20	266	12.7	76	58.2		49.1	171	33.1		41.7	132	57.1		02.7	252	00.1		
21	281	15.2	91	58.6		50.2	186	33.8		41.7	147	59.0		02.5	267	02.7		
22	296	17.7	106	59.0		51.4	201	34.5		41.7	163	00.9		02.4	282	05.2		
23	311	20.1	121	59.4		52.6	216	35.2		41.7	178	02.8		02.2	297	07.8		
24	326	22.6	136	59.8	-5	53.8	231	35.8	+23	41.7	193	04.7	+18	02.1	312	10.3		
Dif	—		+4		-12		+7		0		+19		-1		+25		0	

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 15/8 PMG: 12 ^h 03.9 ^m			Edad: 5.3 ^d SD: 15/2 PMG: 16 ^h 35 ^m			PHE { 4 ^h : 55/6 12 ^h : 55/4 20 ^h : 55/2 Rº: 48 ^m															
	hG ☉	Dec		hG ☾	Dif		Dec	Dif				Civil	Náutico	Hora	Rº	Hora	Rº					
h	°	'	°	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m		
0	179	00.2	+13	09.4	119	01.6	135	-16	13.4	60 N	19	45	20	34	21	45	12	53	95	20	03	5
1	194	00.4		08.6	133	34.1	123		25.7	58	37		22		24		40	89		17	11	
2	209	00.5		07.8	148	06.5	123		38.0	56	30		12	21	08		28	85		29	16	
3	224	00.6		07.0	162	39.0	122	-16	50.2	54	23	20	03	20	54	18	81	40	1	40	11	
4	239	00.8		06.2	177	11.4	120	-17	02.2	52	18	19	55		43		09	78		49	22	
5	254	00.9	+13	05.3	191	43.7	133	-17	14.2	50	19	13	19	48	20	33	12	01	76	20	58	24
6	269	01.0	+13	04.5	206	16.1	119	-17	26.1	45	19	02	19	33	20	12	11	45	70	21	16	29
7	284	01.2		03.7	220	48.4	119		38.0	40	18	53	21	19	56	31	66		31	33		
8	299	01.3		02.9	235	20.7	117	-17	49.7	35	45		12		43		19	63		43	36	
9	314	01.5		02.1	249	52.9	116	-18	01.3	30	38	19	03	33	11	09	60		21	55	38	
10	329	01.6		01.3	264	25.1	116		12.9	20	27	18	49	16	10	52	56		22	14	42	
11	344	01.7	+13	00.5	278	57.3	114	-18	24.3	10 N	18	17	18	38	19	03	52		22	30	46	
12	359	01.9	+12	59.7	293	29.4	114	-18	35.7	0	18	07	18	28	18	53	10	23	49	22	46	49
13	14	02.0		58.9	308	01.5	113		47.0	10 S	17	58		20	44	10	10	44		23	01	53
14	29	02.2		58.1	322	33.6	112	-18	58.2	20	48		11		37	9	55	41		18	56	
15	44	02.3		57.3	337	05.6	111	-19	09.3	30	37	18	02	30	39	36		38	60			
16	59	02.4		56.4	351	37.6	110		20.3	35	31	17	57		27		29	34		23	49	62
17	74	02.6	+12	55.6	6	09.5	109	-19	31.2	40	17	24	17	52	18	24	9	18	31	**	**	**
18	89	02.7	+12	54.8	20	41.4	108	-19	42.0	45	17	16	17	46	18	20	9	05	27	**	**	**
19	104	02.9		54.0	35	13.3	107	-19	52.7	50		06		39	17		8	50	22	**	**	**
20	119	03.0		53.2	49	45.1	106	-20	03.3	52	17	01		36	16		43	19		**	**	**
21	134	03.1		52.4	64	16.9	105		13.8	54	16	56		33	15		35	16		**	**	**
22	149	03.3		51.6	78	48.6	104		24.2	56		51		30	13		26	13		**	**	**
23	164	03.4		50.8	93	20.3	103		34.5	58		44		26	12		16	9		**	**	**
24	179	03.6	+12	49.9	107	51.9	102	-20	44.7	60 S	16	37	17	22	18	11	8	04	4	0	04	95

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 2 ^h 14.1 ^m		Mag: -4.5 PMG: 14 ^h 52 ^m		Mag: +1.3 PMG: 8 ^h 33 ^m		Mag: -1.8 PMG: 11 ^h 06 ^m		Mag: +0.5 PMG: 3 ^h 11 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	°	°	'
0	326	22.6	136	59.8	-5	53.8	231	35.8	+23	41.7
1	341	25.1	152	00.2		55.0	246	36.5		41.6
2	356	27.5	167	00.6		56.1	261	37.2		41.6
3	11	30.0	182	01.0		57.3	276	37.9		41.6
4	26	32.4	197	01.4		58.5	291	38.6		41.6
5	41	34.9	212	01.8	-5	59.7	306	39.2	+23	41.6
6	56	37.4	227	02.2	-6	00.8	321	39.9	+23	41.5
7	71	39.8	242	02.6		02.0	336	40.6		41.5
8	86	42.3	257	03.1		03.2	351	41.3		41.5
9	101	44.8	272	03.5		04.4	6	42.0		41.5
10	116	47.2	287	03.9		05.5	21	42.6		41.5
11	131	49.7	302	04.3	-6	06.7	36	43.3	+23	41.4
12	146	52.2	317	04.7	-6	07.9	51	44.0	+23	41.4
13	161	54.6	332	05.1		09.1	66	44.7		41.4
14	176	57.1	347	05.5		10.2	81	45.4		41.4
15	191	59.6	2	06.0		11.4	96	46.0		41.4
16	207	02.0	17	06.4		12.6	111	46.7		41.3
17	222	04.5	32	06.8	-6	13.8	126	47.4	+23	41.3
18	237	06.9	47	07.2	-6	14.9	141	48.1	+23	41.3
19	252	09.4	62	07.6		16.1	156	48.8		41.3
20	267	11.9	77	08.0		17.3	171	49.4		41.2
21	282	14.3	92	08.5		18.4	186	50.1		41.2
22	297	16.8	107	08.9		19.6	201	50.8		41.2
23	312	19.3	122	09.3		20.8	216	51.5		41.2
24	327	21.7	137	09.7	-6	22.0	231	52.2	+23	41.1
Dif	—		+4		-12		+7		0	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG:12 ^h 03.6 ^m			Edad: 6.3 ^d PHE { 4 ^h : 55/0 12 ^h : 54/9 20 ^h : 54/7 PMG: 17 ^h 22 ^m R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil			Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	03.6	+12	49.9	107	51.9	-20	44.7	60 N	2 23	3 34	4 24	14 27	93	20 07	8		
1	194	03.7		49.1	122	23.6	127	-20	54.9	58	2 44	3 46	32	14 07	85	27 16		
2	209	03.9		48.3	136	55.1	125	-21	04.9	56	3 00	3 56	39	13 51	80	43 22		
3	224	04.0		47.5	151	26.7	126		14.8	54	14	4 05	45	38 76	20 57	26		
4	239	04.1		46.7	165	58.1	124		24.6	52	26	13	50	26 73	21 10	28		
5	254	04.3	+12	45.9	180	29.6	125	-21	34.3	50	3 36	4 20	4 56	13 15	71	21 21	30	
6	269	04.4	+12	45.0	195	01.0	124	-21	43.9	45	3 56	4 35	5 06	12 53	66	21 44	34	
7	284	04.6		44.2	209	32.3	123	-21	53.4	40	4 12	47	15	36 62	22 02	38		
8	299	04.7		43.4	224	03.6	123	-22	02.8	35	25	4 56	23	21 60	18 40			
9	314	04.9		42.6	238	34.9	123		12.1	30	35	5 05	30	12 08	58	31 42		
10	329	05.0		41.8	253	06.1	122		21.3	20	4 52	18	41	11 46	55	22 55	44	
11	344	05.2	+12	41.0	267	37.3	122	-22	30.4	10 N	5 04	5 29	5 51	11 28	51	23 15	47	
12	359	05.3	+12	40.1	282	08.4	121	-22	39.3	0	5 14	5 39	6 00	11 10	49	23 33	50	
13	14	05.4		39.3	296	39.5	121		48.2	10 S	23	48	09	10 53	46	23 52	52	
14	29	05.6		38.5	311	10.6	121	-22	56.9	20	30	5 56	19	35 42	** ** *	** ** *		
15	44	05.7		37.7	325	41.6	120	-23	05.6	30	37	6 05	30	13 40	** ** *	** ** *		
16	59	05.9		36.9	340	12.5	119		14.1	35	40	10	36	10 01	37	** ** *	** ** *	
17	74	06.0	+12	36.1	354	43.4	119	-23	22.5	40	5 43	6 15	6 43	9 47	34	0 02	64	
18	89	06.2	+12	35.2	9	14.3	119	-23	30.8	45	5 46	6 21	6 51	9 31	30	0 18	67	
19	104	06.3		34.4	23	45.1	118		39.0	50	50	27	7 01	10 26		37 72		
20	119	06.5		33.6	38	15.9	118		47.1	52	51	30	05	9 01	23	46 75		
21	134	06.6		32.8	52	46.6	117	-23	55.1	54	52	33	10	8 50	21	0 56	78	
22	149	06.8		31.9	67	17.3	117	-24	02.9	56	53	37	16	37 18		1 08	82	
23	164	06.9		31.1	81	48.0	117		10.7	58	55	40	22	23 13		21 87		
24	179	07.1	+12	30.3	96	18.6	116	-24	18.3	60 S	5 56	6 45	7 28	8 07	6	1 37	94	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 10.2 ^m		Mag: -4.5 PMG: 14 ^h 51 ^m		Mag: +1.3 PMG: 8 ^h 32 ^m		Mag: -1.8 PMG: 11 ^h 03 ^m		Mag: +0.5 PMG: 3 ^h 07 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	327	21.7	137	09.7	-6	22.0	231	52.2	+23	41.1	193	50.6	+17	58.6	313	11.4	+3	14.2
1	342	24.2	152	10.2		23.1	246	52.9		41.1	208	52.5		58.5	328	14.0		14.1
2	357	26.7	167	10.6		24.3	261	53.5		41.1	223	54.5		58.3	343	16.5		14.1
3	12	29.1	182	11.0		25.5	276	54.2		41.0	238	56.4		58.2	358	19.1		14.0
4	27	31.6	197	11.4		26.6	291	54.9		41.0	253	58.3		58.1	13	21.6		14.0
5	42	34.0	212	11.9	-6	27.8	306	55.6	+23	41.0	269	00.2	+17	57.9	28	24.2	+3	13.9
6	57	36.5	227	12.3	-6	29.0	321	56.3	+23	41.0	284	02.1	+17	57.8	43	26.7	+3	13.9
7	72	39.0	242	12.7		30.2	336	57.0		40.9	299	04.0		57.6	58	29.3		13.8
8	87	41.4	257	13.1		31.3	351	57.6		40.9	314	05.9		57.5	73	31.8		13.8
9	102	43.9	272	13.6		32.5	6	58.3		40.9	329	07.9		57.3	88	34.4		13.8
10	117	46.4	287	14.0		33.7	21	59.0		40.8	344	09.8		57.2	103	36.9		13.7
11	132	48.8	302	14.4	-6	34.8	36	59.7	+23	40.8	359	11.7	+17	57.0	118	39.5	+3	13.7
12	147	51.3	317	14.9	-6	36.0	52	00.4	+23	40.8	14	13.6	+17	56.9	133	42.0	+3	13.6
13	162	53.8	332	15.3		37.2	67	01.1		40.8	29	15.5		56.7	148	44.6		13.6
14	177	56.2	347	15.7		38.3	82	01.7		40.7	44	17.4		56.6	163	47.1		13.5
15	192	58.7	2	16.2		39.5	97	02.4		40.7	59	19.4		56.5	178	49.7		13.5
16	208	01.2	17	16.6		40.7	112	03.1		40.7	74	21.3		56.3	193	52.2		13.4
17	223	03.6	32	17.0	-6	41.8	127	03.8	+23	40.6	89	23.2	+17	56.2	208	54.8	+3	13.4
18	238	06.1	47	17.5	-6	43.0	142	04.5	+23	40.6	104	25.1	+17	56.0	223	57.3	+3	13.3
19	253	08.5	62	17.9		44.2	157	05.2		40.6	119	27.0		55.9	238	59.9		13.3
20	268	11.0	77	18.3		45.3	172	05.9		40.5	134	28.9		55.7	254	02.4		13.2
21	283	13.5	92	18.8		46.5	187	06.5		40.5	149	30.8		55.6	269	05.0		13.2
22	298	15.9	107	19.2		47.7	202	07.2		40.5	164	32.8		55.4	284	07.5		13.1
23	313	18.4	122	19.6		48.8	217	07.9		40.4	179	34.7		55.3	299	10.1		13.1
24	328	20.9	137	20.1	-6	50.0	232	08.6	+23	40.4	194	36.6	+17	55.2	314	12.6	+3	13.0
Dif	—		+4		-12		+7		0		+19		-1		+26		0	

UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 03.4 ^m			Edad: 7.3 ^d SD: 14'9 PMG: 18 ^h 11 ^m PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 R°: 52 ^m							Civil		Náutico		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m
0	179 07.1	+12 30.3	96 18.6	115	-24 18.3	75	58	60 N	19 39	20 28	21 36	16 00 85	20 15 23			
1	194 07.2	29.5	110 49.1	115	25.8	74	58	58	31	16	17	15 32 77	20 43 31			
2	209 07.4	28.7	125 19.6	115	33.2	73	56	56	25	20 07	21 01	15 11 73	21 05 35			
3	224 07.5	27.8	139 50.1	114	40.5	72	54	54	19	19 58	20 49	14 54 69	23 38			
4	239 07.7	27.0	154 20.5	114	47.7	70	52	52	14	51	37	39 67	38 40			
5	254 07.8	+12 26.2	168 50.9	114	-24 54.7	69	50	50	19 09	19 44	20 28	14 26 65	21 51 41			
6	269 08.0	+12 25.4	183 21.2	113	-25 01.6	68	45	45	18 58	19 30	20 08	13 59 63	22 18 44			
7	284 08.1	24.5	197 51.5	113	08.4	67	40	40	50	18	19 53	38 61	40 46			
8	299 08.3	23.7	212 21.8	113	15.1	66	35	35	43	09	41	21 59	22 58 47			
9	314 08.4	22.9	226 52.0	112	21.7	64	30	30	36	19 01	30	13 06 58	23 13 48			
10	329 08.6	22.1	241 22.2	112	28.1	64	20	20	25	18 48	14	12 41 55	23 39 50			
11	344 08.7	+12 21.2	255 52.3	111	-25 34.5	64	10 N	18 16	18 37	19 02	12 19 54	** ** *	** ** *			
12	359 08.9	+12 20.4	270 22.4	111	-25 40.7	62	0	0	18 07	18 28	18 52	11 59 52	** ** *	** ** *		
13	14 09.0	19.6	284 52.4	110	46.8	59	10 S	17 58	19	44	39 50	** ** *	** ** *			
14	29 09.2	18.8	299 22.4	110	52.7	59	20	20	49	11	37	11 17 48	0 13 55			
15	44 09.3	17.9	313 52.4	110	-25 58.6	57	30	30	38	18 03	31	10 53 45	36 59			
16	59 09.5	17.1	328 22.3	109	-26 04.3	57	35	35	33	17 58	28	38 44	0 50 60			
17	74 09.6	+12 16.3	342 52.2	109	-26 09.9	56	40	40	17 26	17 54	18 25	10 21 43	1 06 63			
18	89 09.8	+12 15.4	357 22.0	108	-26 15.3	54	45	45	17 18	17 48	18 23	10 01 40	1 25 66			
19	104 09.9	14.6	11 51.8	108	20.7	52	50	50	09	42	20	9 36 37	1 49 70			
20	119 10.1	13.8	26 21.6	108	25.9	52	52	52	04	39	19	24 35	2 01 71			
21	134 10.2	13.0	40 51.3	107	31.0	51	54	54	17 00	36	18	9 11 32	14 74			
22	149 10.4	12.1	55 21.0	107	35.9	49	56	56	16 55	33	17	8 55 29	30 77			
23	164 10.5	11.3	69 50.7	107	40.8	49	58	58	49	30	16	36 24	2 48 83			
24	179 10.7	+12 10.5	84 20.3	106	-26 45.5	47	60 S	16 42	17 26	18 15	8 13 16	3 11 90				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 2 ^h 06.3 ^m		Mag: -4.5 PMG: 14 ^h 50 ^m		Mag: +1.3 PMG: 8 ^h 31 ^m		Mag: -1.8 PMG: 11 ^h 00 ^m		Mag: +0.5 PMG: 3 ^h 03 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	328 20.9	137 20.1	-6 50.0	232 08.6	+23 40.4	194 36.6	+17 55.2	314 12.6	+3 13.0	
1	343 23.3	152 20.5	51.2	247 09.3	40.4	209 38.5	55.0	329 15.2	13.0	
2	358 25.8	167 21.0	52.3	262 10.0	40.3	224 40.4	54.9	344 17.7	13.0	
3	13 28.3	182 21.4	53.5	277 10.7	40.3	239 42.3	54.7	359 20.3	12.9	
4	28 30.7	197 21.8	54.6	292 11.4	40.3	254 44.2	54.6	14 22.8	12.9	
5	43 33.2	212 22.3	-6 55.8	307 12.0	+23 40.2	269 46.2	+17 54.4	29 25.4	+3 12.8	
6	58 35.7	227 22.7	-6 57.0	322 12.7	+23 40.2	284 48.1	+17 54.3	44 27.9	+3 12.8	
7	73 38.1	242 23.2	58.1	337 13.4	40.2	299 50.0	54.1	59 30.5	12.7	
8	88 40.6	257 23.6	-6 59.3	352 14.1	40.1	314 51.9	54.0	74 33.1	12.7	
9	103 43.0	272 24.1	-7 00.5	7 14.8	40.1	329 53.8	53.9	89 35.6	12.6	
10	118 45.5	287 24.5	01.6	22 15.5	40.0	344 55.7	53.7	104 38.2	12.6	
11	133 48.0	302 25.0	-7 02.8	37 16.2	+23 40.0	359 57.7	+17 53.6	119 40.7	+3 12.5	
12	148 50.4	317 25.4	-7 03.9	52 16.9	+23 40.0	14 59.6	+17 53.4	134 43.3	+3 12.5	
13	163 52.9	332 25.9	05.1	67 17.5	39.9	30 01.5	53.3	149 45.8	12.4	
14	178 55.4	347 26.3	06.3	82 18.2	39.9	45 03.4	53.1	164 48.4	12.4	
15	193 57.8	2 26.8	07.4	97 18.9	39.9	60 05.3	53.0	179 50.9	12.3	
16	209 00.3	17 27.2	08.6	112 19.6	39.8	75 07.2	52.8	194 53.5	12.3	
17	224 02.8	32 27.7	-7 09.7	127 20.3	+23 39.8	90 09.2	+17 52.7	209 56.0	+3 12.2	
18	239 05.2	47 28.1	-7 10.9	142 21.0	+23 39.7	105 11.1	+17 52.5	224 58.6	+3 12.2	
19	254 07.7	62 28.6	12.0	157 21.7	39.7	120 13.0	52.4	240 01.1	12.1	
20	269 10.1	77 29.0	13.2	172 22.4	39.7	135 14.9	52.3	255 03.7	12.1	
21	284 12.6	92 29.5	14.4	187 23.1	39.6	150 16.8	52.1	270 06.3	12.0	
22	299 15.1	107 29.9	15.5	202 23.8	39.6	165 18.7	52.0	285 08.8	12.0	
23	314 17.5	122 30.4	16.7	217 24.4	39.5	180 20.7	51.8	300 11.4	11.9	
24	329 20.0	137 30.8	-7 17.8	232 25.1	+23 39.5	195 22.6	+17 51.7	315 13.9	+3 11.9	
Dif	—	+4	-12	+7	0	+19	-1	+26	0	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 03.2 ^m			Edad: 8.3 ^d PHE { 4 ^h : 54 ^h /3 12 ^h : 54 ^h /2 20 ^h : 54 ^h /2 PMG: 19 ^h 02 ^m Rº: 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	10.7	+12	10.5	84	20.3	-26	45.5	46	60 N	2 32	3 40	4 29	17 24	58	20 37	49	
1	194	10.8		09.6	98	49.9		50.1	44	58	2 50	3 51	36	16 48	56	21 13	50	
2	209	11.0		08.8	113	19.5		54.5	44	56	3 06	4 01	43	22 56		39 50		
3	224	11.1		08.0	127	49.0	-26	58.8	43	54	19	09	48	16 02	55	21 59	51	
4	239	11.3		07.1	142	18.5	-27	03.0	42	52	30	17	54	15 45	55	22 16	52	
5	254	11.4	+12	06.3	156	48.0	-27	07.1	41	50	3 40	4 23	4 58	15 30	55	22 31	52	
6	269	11.6	+12	05.5	171	17.4	-27	11.0	39	45	3 59	4 37	5 09	15 00	55	23 01	51	
7	284	11.8		04.6	185	46.8		14.8	38	40	4 14	49	17	14 37	54		52	
8	299	11.9		03.8	200	16.2		18.5	37	35	26	4 58	24	18 54		23 43	52	
9	314	12.1		03.0	214	45.5		22.0	35	30	37	5 06	31	14 02	53	** ** *	**	
10	329	12.2		02.1	229	14.8		25.5	35	20	4 52	19	42	13 35	52	** ** *	**	
11	344	12.4	+12	01.3	243	44.1	-27	28.7	32	10 N	5 04	5 30	5 51	13 11	52	0 02	50	
12	359	12.5	+12	00.5	258	13.4	-27	31.9	32	0	5 14	5 39	6 00	12 49	52	0 23	51	
13	14	12.7	+11	59.6	272	42.6		34.9	30	10 S	22	47	08	27 51	0	44 52		
14	29	12.8		58.8	287	11.8		37.8	29	20	29	5 55	17	12 04	50	1 07	53	
15	44	13.0		58.0	301	41.0		40.5	27	30	35	6 03	28	11 37	49		55	
16	59	13.2		57.1	316	10.2		43.2	27	35	38	08	34	21 49		1 49	56	
17	74	13.3	+11	56.3	330	39.3	-27	45.7	25	40	5 41	6 12	6 40	11 02	48	2 07	57	
18	89	13.5	+11	55.5	345	08.4	-27	48.0	23	45	5 43	6 18	6 48	10 40	47	2 29	58	
19	104	13.6		54.6	359	37.5		50.2	22	50	46	24	6 57	10 11	46	2 57	60	
20	119	13.8		53.8	14	06.6		52.3	21	52	47	26	7 01	9 57	45	3 11	61	
21	134	13.9		53.0	28	35.7		54.3	20	54	48	29	06	41 44		27 62		
22	149	14.1		52.1	43	04.7		56.1	18	56	49	32	11	9 22	42	3 46	64	
23	164	14.3		51.3	57	33.8		57.8	17	58	50	36	16	8 59	39	4 09	67	
24	179	14.4	+11	50.4	72	02.8	-27	59.3	15	60 S	5 51	6 39	7 23	8 27	35	4 40	72	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 02.3 ^m		Mag: -4.5 PMG: 14 ^h 49 ^m		Mag: +1.3 PMG: 8 ^h 30 ^m		Mag: -1.8 PMG: 10 ^h 57 ^m		Mag: +0.5 PMG: 2 ^h 59 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	329	20.0	137	30.8	-7	17.8	232	25.1	+23	39.5	195	22.6	+17	51.7	315	13.9	+3	11.9
1	344	22.5	152	31.3		19.0	247	25.8		39.5	210	24.5		51.5	330	16.5		11.8
2	359	24.9	167	31.8		20.1	262	26.5		39.4	225	26.4		51.4	345	19.0		11.8
3	14	27.4	182	32.2		21.3	277	27.2		39.4	240	28.3		51.2	0	21.6		11.7
4	29	29.9	197	32.7		22.5	292	27.9		39.3	255	30.2		51.1	15	24.1		11.7
5	44	32.3	212	33.1	-7	23.6	307	28.6	+23	39.3	270	32.2	+17	51.0	30	26.7	+3	11.7
6	59	34.8	227	33.6	-7	24.8	322	29.3	+23	39.2	285	34.1	+17	50.8	45	29.3	+3	11.6
7	74	37.3	242	34.1		25.9	337	30.0		39.2	300	36.0		50.7	60	31.8		11.6
8	89	39.7	257	34.5		27.1	352	30.7		39.2	315	37.9		50.5	75	34.4		11.5
9	104	42.2	272	35.0		28.2	7	31.4		39.1	330	39.8		50.4	90	36.9		11.5
10	119	44.6	287	35.5		29.4	22	32.1		39.1	345	41.7		50.2	105	39.5		11.4
11	134	47.1	302	35.9	-7	30.5	37	32.7	+23	39.0	0	43.7	+17	50.1	120	42.0	+3	11.4
12	149	49.6	317	36.4	-7	31.7	52	33.4	+23	39.0	15	45.6	+17	49.9	135	44.6	+3	11.3
13	164	52.0	332	36.9		32.8	67	34.1		38.9	30	47.5		49.8	150	47.2		11.3
14	179	54.5	347	37.3		34.0	82	34.8		38.9	45	49.4		49.6	165	49.7		11.2
15	194	57.0	2	37.8		35.1	97	35.5		38.8	60	51.3		49.5	180	52.3		11.2
16	209	59.4	17	38.3		36.3	112	36.2		38.8	75	53.2		49.4	195	54.8		11.1
17	225	01.9	32	38.7	-7	37.4	127	36.9	+23	38.7	90	55.2	+17	49.2	210	57.4	+3	11.1
18	240	04.4	47	39.2	-7	38.6	142	37.6	+23	38.7	105	57.1	+17	49.1	225	59.9	+3	11.0
19	255	06.8	62	39.7		39.7	157	38.3		38.6	120	59.0		48.9	241	02.5		11.0
20	270	09.3	77	40.1		40.9	172	39.0		38.6	136	00.9		48.8	256	05.1		10.9
21	285	11.8	92	40.6		42.0	187	39.7		38.6	151	02.8		48.6	271	07.6		10.9
22	300	14.2	107	41.1		43.2	202	40.4		38.5	166	04.8		48.5	286	10.2		10.8
23	315	16.7	122	41.6		44.3	217	41.1		38.5	181	06.7		48.3	301	12.7		10.8
24	330	19.1	137	42.0	-7	45.5	232	41.8	+23	38.4	196	08.6	+17	48.2	316	15.3	+3	10.7
Dif	—		+5		-12		+7		0		+19		-1		+26			

UT	SOL		LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG:12 ^h 02.9 ^m		Edad: 9.3 ^d SD: 14'8 PMG: 19 ^h 53 ^m		PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2 R°: 53 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /		° /		°	h m	h m	h m	h m	h m	h m	h m	m	m
0	179 14.4	+11 50.4	72 02.8		-27 59.3		60 N	19 33	20 21	21 27	18 22	29	21 26	80		
1	194 14.6		86 31.8	100	-28 00.7	14	58	26	10	21 09	17 44	37	22 03	73		
2	209 14.7		101 00.8	100	02.0	13	56	20	20 01	20 55	17 18	40	29	70		
3	224 14.9		115 29.7	99	03.1	11	54	14	19 53	43	16 57	42	22 50	67		
4	239 15.0		129 58.7	100	04.2	11	52	09	46	32	40 43	23 08	65			
5	254 15.2	+11 46.2	144 27.7	100	-28 05.0	8	50	19 05	19 40	20 23	16 25	44	23 23	63		
6	269 15.4	+11 45.4	158 56.6	99	-28 05.8	8	45	18 55	19 26	20 04	15 55	46	23 52	62		
7	284 15.5		173 25.5	99	06.4	6	40	47	15	19 49	31 48		** ** *			
8	299 15.7		187 54.5	100	06.8	4	35	40	19 06	38	15 12	49	** ** *			
9	314 15.8		202 23.4	99	07.2	4	30	34	18 59	28	14 55	50	0 00	53		
10	329 16.0		216 52.3	99	07.3	1	20	24	46	13	27 51		28 53			
11	344 16.2	+11 41.2	231 21.2	99	-28 07.4	1	10 N	18 15	18 36	19 01	14 03	52	0 52	53		
12	359 16.3	+11 40.4	245 50.1	99	-28 07.3	1	0	18 06	18 27	18 52	13 41	52	1 14	53		
13	14 16.5		39.5	260 19.1	07.1	2	10 S	17 58	19	44	13 18	54	1 36	53		
14	29 16.6		38.7	274 48.0	06.7	4	20	49	12	38	12 54	54	2 00	53		
15	44 16.8		37.8	289 16.9	06.3	7	30	40	04	32	26 56		28 52			
16	59 17.0		37.0	303 45.8	05.6	7	35	34	18 00	29	12 10	56	2 45	52		
17	74 17.1	+11 36.1	318 14.7	99	-28 04.9	7	40	17 28	17 55	18 27	11 50	57	3 04	51		
18	89 17.3	+11 35.3	332 43.6	99	-28 04.0	9	45	17 20	17 50	18 25	11 27	57	3 27	51		
19	104 17.4		34.5	347 12.5	02.9	11	50	12	45	23	10 57	59	3 57	50		
20	119 17.6		33.6 1 41.5	100	01.8	11	52	08	42	22	42 59		4 12	50		
21	134 17.8		32.8	16 10.4	-28 00.5	13	54	17 03	40	21	25 60		29 49			
22	149 17.9		31.9	30 39.3	-27 59.0	15	56	16 58	37	20	10 04	61	4 50	48		
23	164 18.1		31.1	45 08.3	57.5	15	58	53	34	19	9 38	63	5 16	47		
24	179 18.3	+11 30.2	59 37.2	99	-27 55.7	18	60 S	16 47	17 30	18 19	9 02	66	5 52	44		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 1 ^h 58.4 ^m		Mag: -4.5 PMG: 14 ^h 49 ^m		Mag: +1.3 PMG: 8 ^h 29 ^m		Mag: -1.8 PMG: 10 ^h 54 ^m		Mag: +0.5 PMG: 2 ^h 54 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /		° /		° /		° /	
0	330 19.1	137 42.0	-7 45.5	232 41.8	+23 38.4	196 08.6	+17 48.2	316 15.3	+3 10.7	
1	345 21.6	152 42.5	46.6	247 42.5	38.4	211 10.5	48.0	331 17.9	10.7	
2	0 24.1	167 43.0	47.8	262 43.2	38.3	226 12.4	47.9	346 20.4	10.6	
3	15 26.5	182 43.5	48.9	277 43.9	38.3	241 14.3	47.8	1 23.0	10.6	
4	30 29.0	197 44.0	50.1	292 44.6	38.2	256 16.3	47.6	16 25.5	10.5	
5	45 31.5	212 44.4	-7 51.2	307 45.2	+23 38.2	271 18.2	+17 47.5	31 28.1	+3 10.5	
6	60 33.9	227 44.9	-7 52.4	322 45.9	+23 38.1	286 20.1	+17 47.3	46 30.7	+3 10.4	
7	75 36.4	242 45.4	53.5	337 46.6	38.1	301 22.0	47.2	61 33.2	10.4	
8	90 38.9	257 45.9	54.7	352 47.3	38.0	316 23.9	47.0	76 35.8	10.3	
9	105 41.3	272 46.4	55.8	7 48.0	37.9	331 25.9	46.9	91 38.3	10.3	
10	120 43.8	287 46.8	57.0	22 48.7	37.9	346 27.8	46.7	106 40.9	10.2	
11	135 46.3	302 47.3	-7 58.1	37 49.4	+23 37.8	1 29.7	+17 46.6	121 43.5	+3 10.2	
12	150 48.7	317 47.8	-7 59.2	52 50.1	+23 37.8	16 31.6	+17 46.4	136 46.0	+3 10.1	
13	165 51.2	332 48.3	-8 00.4	67 50.8	37.7	31 33.5	46.3	151 48.6	10.1	
14	180 53.6	347 48.8	01.5	82 51.5	37.7	46 35.5	46.2	166 51.1	10.0	
15	195 56.1	2 49.3	02.7	97 52.2	37.6	61 37.4	46.0	181 53.7	10.0	
16	210 58.6	17 49.8	03.8	112 52.9	37.6	76 39.3	45.9	196 56.3	09.9	
17	226 01.0	32 50.2	-8 05.0	127 53.6	+23 37.5	91 41.2	+17 45.7	211 58.8	+3 09.9	
18	241 03.5	47 50.7	-8 06.1	142 54.3	+23 37.5	106 43.1	+17 45.6	227 01.4	+3 09.8	
19	256 06.0	62 51.2	07.2	157 55.0	37.4	121 45.1	45.4	242 03.9	09.7	
20	271 08.4	77 51.7	08.4	172 55.7	37.4	136 47.0	45.3	257 06.5	09.7	
21	286 10.9	92 52.2	09.5	187 56.4	37.3	151 48.9	45.1	272 09.1	09.6	
22	301 13.4	107 52.7	10.7	202 57.1	37.2	166 50.8	45.0	287 11.6	09.6	
23	316 15.8	122 53.2	11.8	217 57.8	37.2	181 52.7	44.8	302 14.2	09.5	
24	331 18.3	137 53.7	-8 12.9	232 58.5	+23 37.1	196 54.7	+17 44.7	317 16.8	+3 09.5	
Dif	—	+5	-11	+7	-1	+19	-1	+26	-1	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG:12 ^h 02.7 ^m			Edad: 10.3 ^d PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4 R°: 50 ^m PMG: 20 ^h 44 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	18.3	+11	59	37.2	-27	55.7	18	60 N	2	39	3	45	4	33	18	49
1	194	18.4		74	06.2		53.9	20	58	2	57	3	56	40	18	19	
2	209	18.6		88	35.2		51.9	21	56	3	11	4	05	47	17	56	
3	224	18.7		103	04.9		49.8	23	54	24		13	52	38	28	23	
4	239	18.9		117	33.2		47.5	24	52	34	20		4	57	22	30	
5	254	19.1	+11	132	02.2	-27	45.1	25	50	3	43	4	27	5	01	17	
6	269	19.2	+11	146	31.2	-27	42.6	25	45	4	02	4	40	5	11	16	
7	284	19.4		161	00.3		40.0	26	40	17	4	51	19	16	18	39	
8	299	19.6		175	29.3		37.2	28	35	28	5	00	26	15	59	42	
9	314	19.7		189	58.4		34.2	30	30	38		07	32	43	44	0	
10	329	19.9		204	27.5		31.2	30	20	4	53	20	42	15	17	46	
11	344	20.1	+11	218	56.7	-27	28.0	32	10 N	5	05	5	30	5	51	14	
12	359	20.2	+11	233	25.8	-27	24.7	33	0	5	14	5	38	5	59	14	
13	14	20.4		247	55.0		21.2	35	10 S	21		46	6	07	14	10	
14	29	20.6		262	24.2		17.6	36	20	28	5	54	16	13	47	55	
15	44	20.7		276	53.4		13.9	37	30	33	6	01	26	20	57	3	
16	59	20.9		291	22.7		10.0	39	35	36		05	31	13	04	59	
17	74	21.1	+11	305	51.9	-27	06.0	40	40	5	38	6	10	6	37	12	
18	89	21.2	+11	320	21.2	-27	01.9	42	45	5	40	6	14	6	44	12	
19	104	21.4		334	50.6	-26	57.7	42	50	42		20	53	11	54	67	
20	119	21.6		349	19.9		53.3	44	52	43	22		6	57	40	68	
21	134	21.7		3	49.3		48.8	45	54	44	25		7	01	24	70	
22	149	21.9		18	18.7		44.1	47	56	44	28		06	11	04	74	
23	164	22.1		32	48.2		39.4	47	58	45	31		11	10	39	79	
24	179	22.2	+11	47	17.6	-26	34.5	49	60 S	5	46	6	34	7	17	10	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 54.5 ^m		Mag: -4.5 PMG: 14 ^h 48 ^m		Mag: +1.3 PMG: 8 ^h 28 ^m		Mag: -1.8 PMG: 10 ^h 51 ^m		Mag: +0.5 PMG: 2 ^h 50 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	331	18.3	137	53.7	-8	12.9	232	58.5	+23	37.1
1	346	20.7	152	54.2		14.1	247	59.2		37.1
2	1	23.2	167	54.7		15.2	262	59.9		37.0
3	16	25.7	182	55.2		16.4	278	00.6		37.0
4	31	28.1	197	55.7		17.5	293	01.3		36.9
5	46	30.6	212	56.2	-8	18.6	308	02.0	+23	36.8
6	61	33.1	227	56.7	-8	19.8	323	02.7	+23	36.8
7	76	35.5	242	57.2		20.9	338	03.4		36.7
8	91	38.0	257	57.7		22.0	353	04.1		36.7
9	106	40.5	272	58.2		23.2	8	04.8		36.6
10	121	42.9	287	58.7		24.3	23	05.5		36.5
11	136	45.4	302	59.2	-8	25.4	38	06.2	+23	36.5
12	151	47.9	317	59.7	-8	26.6	53	06.9	+23	36.4
13	166	50.3	333	00.2		27.7	68	07.6		36.4
14	181	52.8	348	00.7		28.9	83	08.3		36.3
15	196	55.2	3	01.2		30.0	98	09.0		36.2
16	211	57.7	18	01.7		31.1	113	09.7		36.2
17	227	00.2	33	02.2	-8	32.3	128	10.4	+23	36.1
18	242	02.6	48	02.7	-8	33.4	143	11.1	+23	36.1
19	257	05.1	63	03.2		34.5	158	11.8		36.0
20	272	07.6	78	03.7		35.7	173	12.5		35.9
21	287	10.0	93	04.2		36.8	188	13.2		35.9
22	302	12.5	108	04.7		37.9	203	13.9		35.8
23	317	15.0	123	05.3		39.0	218	14.6		35.7
24	332	17.4	138	05.8	-8	40.2	233	15.3	+23	35.7
Dif	—		+5	-11			+7	-1		
									+19	-1
										+26
										-1

UT	SOL			☾ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 02.4 ^m			Edad: 11.3 ^d PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil			Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	179	22.2	+11 09.8	47	17.6	-26 34.5	51	60 N	19 27	20 15	21 19	19 01	6	**	**	**	**	
1	194	22.4	09.0	61	47.2	29.4	51	58	21	20 05	21 02	18 39	12	**	**	**	**	
2	209	22.6	08.1	76	16.7	24.3	53	56	15	19 56	20 48	21 17		**	**	**	**	
3	224	22.7	07.3	90	46.3	19.0	54	54	10	48	37	18 06	20	**	**	**	**	
4	239	22.9	06.4	105	15.9	13.6	56	52	05	41	27	17 52	24	0	11	74		
5	254	23.1	+11 05.6	119	45.6	-26 08.0	54	50	19 01	19 35	20 18	17 41	26	0	25	71		
6	269	23.2	+11 04.7	134	15.2	-26 02.4	56	45	18 52	19 23	20 00	17 17	31	0	52	67		
7	284	23.4	03.9	148	45.0	-25 56.6	58	40	44	12	19 46	16 57	35	1	14	64		
8	299	23.6	03.0	163	14.7	50.7	59	35	37	19 04	35	41	37	32	61			
9	314	23.7	02.2	177	44.5	44.6	61	30	32	18 56	26	27	39	1	47	60		
10	329	23.9	01.3	192	14.4	38.4	62	20	22	45	11	16 03	43	2	13	56		
11	344	24.1	+11 00.4	206	44.2	-25 32.1	63	10 N	18 14	18 35	19 00	15 42	47	2	36	53		
12	359	24.2	+10 59.6	221	14.2	-25 25.7	64	0	18 06	18 27	18 51	15 22	50	2	56	51		
13	14	24.4	58.7	235	44.1	19.2	65	10 S	17 58	19	44	15 03	53	3	17	48		
14	29	24.6	57.9	250	14.1	12.5	67	20	50	12	38	14 42	56	3	39	46		
15	44	24.8	57.0	264	44.2	-25 05.8	67	30	41	05	33	17 60		4	05	42		
16	59	24.9	56.2	279	14.2	-24 58.9	69	35	35	18 01	31	14 03	62	20	40			
17	74	25.1	+10 55.3	293	44.4	-24 51.8	71	40	17 30	17 57	18 29	13 46	65	4	37	38		
18	89	25.3	+10 54.4	308	14.5	-24 44.7	73	45	17 23	17 53	18 27	13 26	69	4	58	34		
19	104	25.4	53.6	322	44.7	37.4	74	50	15	48	25	13 01	73	5	24	30		
20	119	25.6	52.7	337	15.0	30.0	74	52	11	45	25	12 48	76	36	28			
21	134	25.8	51.9	351	45.3	22.5	75	54	07	43	24	34 79		5	51	25		
22	149	25.9	51.0	6	15.7	14.9	76	56	17 02	40	24	12 18	83	6	08	21		
23	164	26.1	50.1	20	46.0	-24 07.2	77	58	16 57	38	23	11 58	88	28	16			
24	179	26.3	+10 49.3	35	16.5	-23 59.3	79	60 S	16 51	17 35	18 23	11 33	95	6	53	9		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 1 ^h 50.5 ^m		Mag: -4.5 PMG: 14 ^h 47 ^m		Mag: +1.2 PMG: 8 ^h 27 ^m		Mag: -1.8 PMG: 10 ^h 48 ^m		Mag: +0.5 PMG: 2 ^h 46 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	332	17.4	138 05.8	-8 40.2	233 15.3	+23 35.7	197 40.8	+17 41.2	318 18.3	+3 08.2
1	347	19.9	153 06.3	41.3	248 16.0	35.6	212 42.7	41.1	333 20.9	08.2
2	2	22.4	168 06.8	42.4	263 16.8	35.5	227 44.6	40.9	348 23.4	08.1
3	17	24.8	183 07.3	43.6	278 17.5	35.5	242 46.5	40.8	3	26.0
4	32	27.3	198 07.8	44.7	293 18.2	35.4	257 48.4	40.6	18	28.6
5	47	29.7	213 08.4	-8 45.8	308 18.9	+23 35.4	272 50.4	+17 40.5	33	31.1
6	62	32.2	228 08.9	-8 47.0	323 19.6	+23 35.3	287 52.3	+17 40.3	48	33.7
7	77	34.7	243 09.4	48.1	338 20.3	35.2	302 54.2	40.2	63	36.3
8	92	37.1	258 09.9	49.2	353 21.0	35.2	317 56.1	40.0	78	38.8
9	107	39.6	273 10.4	50.3	8 21.7	35.1	332 58.0	39.9	93	41.4
10	122	42.1	288 11.0	51.5	23 22.4	35.0	348 00.0	39.8	108	44.0
11	137	44.5	303 11.5	-8 52.6	38 23.1	+23 35.0	3	01.9	+17 39.6	123 46.5
12	152	47.0	318 12.0	-8 53.7	53 23.8	+23 34.9	18 03.8	+17 39.5	138 49.1	+3 07.6
13	167	49.5	333 12.5	54.8	68 24.5	34.8	33 05.7	39.3	153 51.7	07.6
14	182	51.9	348 13.0	56.0	83 25.2	34.7	48 07.7	39.2	168 54.2	07.5
15	197	54.4	3	13.6	98 25.9	34.7	63 09.6	39.0	183 56.8	07.5
16	212	56.9	18 14.1	58.2	113 26.6	34.6	78 11.5	38.9	198 59.4	07.4
17	227	59.3	33 14.6	-8 59.3	128 27.3	+23 34.5	93 13.4	+17 38.7	214 01.9	+3 07.3
18	243	01.8	48 15.2	-9 00.5	143 28.0	+23 34.5	108 15.3	+17 38.6	229 04.5	+3 07.3
19	258	04.2	63 15.7	01.6	158 28.8	34.4	123 17.3	38.4	244 07.1	07.2
20	273	06.7	78 16.2	02.7	173 29.5	34.3	138 19.2	38.3	259 09.6	07.2
21	288	09.2	93 16.7	03.8	188 30.2	34.3	153 21.1	38.1	274 12.2	07.1
22	303	11.6	108 17.3	04.9	203 30.9	34.2	168 23.0	38.0	289 14.8	07.1
23	318	14.1	123 17.8	06.1	218 31.6	34.1	183 25.0	37.9	304 17.3	07.0
24	333	16.6	138 18.3	-9 07.2	233 32.3	+23 34.0	198 26.9	+17 37.7	319 19.9	+3 07.0
Dif	—		+5	-11	+7	-1	+19	-1	+26	-1

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15'8 PMG:12 ^h 02.1 ^m				Edad: 12.3 ^d PHE { 4 ^h : 54'8 12 ^h : 54'9 20 ^h : 55'0 PMG: 22 ^h 22 ^m R°: 46 ^m																		
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m			
0	179	26.3	+10	49.3	35	16.5	-23	59.3	79	51.4	60 N	2	47	3	51	4	38	19	05	2	0	17	95
1	194	26.5		48.4	49	47.0		51.4	81	58	58	3	03	4	01	45	18	50	6		38	88	
2	209	26.6		47.6	64	17.5		43.3	82	56	56	17		10		50	36	11		0	56	83	
3	224	26.8		46.7	78	48.1		35.1	83	54	54	28		17		4	56	25	14		1	11	79
4	239	27.0		45.8	93	18.7		26.8	83	52	52	38		24		5	00	15	17		23	77	
5	254	27.2	+10	45.0	107	49.4	-23	18.4	84	50	50	3	47	4	30	5	04	18	06	19	1	35	73
6	269	27.3	+10	44.1	122	20.1	-23	09.8	86	45	45	4	05	4	43	5	14	17	46	24	1	58	68
7	284	27.5		43.3	136	50.8	-23	01.2	88	40	40	19		4	53	21	30	29		2	16	65	
8	299	27.7		42.4	151	21.6	-22	52.4	88	35	35	30		5	01	27	17	31		32	61		
9	314	27.8		41.5	165	52.5		43.6	88	30	30	39		08		33	17	05	34	2	45	59	
10	329	28.0		40.7	180	23.4		34.6	90	20	20	4	54		20	43	16	45	39	3	08	55	
11	344	28.2	+10	39.8	194	54.3	-22	25.5	91	10 N	10 N	5	05	5	30	5	51	16	27	43	3	28	51
12	359	28.4	+10	38.9	209	25.3	-22	16.3	92	0	0	5	13	5	38	5	59	16	11	46	3	46	47
13	14	28.5		38.1	223	56.4	-22	07.0	93	10 S	10 S	20		45		6	06	15	54	51	4	04	44
14	29	28.7		37.2	238	27.5	-21	57.6	94	20	20	26		52		14	36	55		23	41		
15	44	28.9		36.3	252	58.6		48.1	95	30	30	31		5	59	23	16	59		45	37		
16	59	29.1		35.5	267	29.8		38.5	96	35	35	33		6	03	28	15	04	62	4	58	34	
17	74	29.2	+10	34.6	282	01.1	-21	28.8	97	40	40	5	35	6	07	6	34	14	50	65	5	13	31
18	89	29.4	+10	33.7	296	32.3	-21	18.9	99	45	45	5	37	6	11	6	41	14	33	69	5	31	26
19	104	29.6		32.9	311	03.7	-21	09.0	99	50	50	38		16		49	13	74		5	52	22	
20	119	29.8		32.0	325	35.1	-20	59.0	100	52	52	39		18		53	14	03	77	6	03	19	
21	134	29.9		31.1	340	06.5		48.9	101	54	54	39		20		6	57	13	52	80	14	17	
22	149	30.1		30.3	354	38.0		38.6	103	56	56	40		23		7	01	39	84	27	13		
23	164	30.3		29.4	9	09.5		28.3	103	58	58	40		26		06	24	89		6	43	8	
24	179	30.5	+10	28.5	23	41.1	-20	17.9	104	60 S	60 S	5	40	6	29	7	12	13	07	94	7	01	3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 1 ^h 46.6 ^m		Mag: -4.5 PMG: 14 ^h 46 ^m		Mag: +1.2 PMG: 8 ^h 25 ^m		Mag: -1.8 PMG: 10 ^h 45 ^m		Mag: +0.5 PMG: 2 ^h 42 ^m									
	hG ♂		hG ♀		hG ♂		hG ♀		hG ♀									
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	333	16.6	138	18.3	-9	07.2	233	32.3	+23	34.0	198	26.9	+17	37.7	319	19.9	+3	07.0
1	348	19.0	153	18.9		08.3	248	33.0		34.0	213	28.8		37.6	334	22.5		06.9
2	3	21.5	168	19.4		09.4	263	33.7		33.9	228	30.7		37.4	349	25.0		06.9
3	18	24.0	183	19.9		10.5	278	34.4		33.8	243	32.7		37.3	4	27.6		06.8
4	33	26.4	198	20.5		11.7	293	35.1		33.8	258	34.6		37.1	19	30.2		06.8
5	48	28.9	213	21.0	-9	12.8	308	35.8	+23	33.7	273	36.5	+17	37.0	34	32.7	+3	06.7
6	63	31.3	228	21.6	-9	13.9	323	36.5	+23	33.6	288	38.4	+17	36.8	49	35.3	+3	06.6
7	78	33.8	243	22.1		15.0	338	37.3		33.5	303	40.4		36.7	64	37.9		06.6
8	93	36.3	258	22.6		16.1	353	38.0		33.5	318	42.3		36.5	79	40.5		06.5
9	108	38.7	273	23.2		17.3	8	38.7		33.4	333	44.2		36.4	94	43.0		06.5
10	123	41.2	288	23.7		18.4	23	39.4		33.3	348	46.1		36.3	109	45.6		06.4
11	138	43.7	303	24.3	-9	19.5	38	40.1	+23	33.2	3	48.0	+17	36.1	124	48.2	+3	06.4
12	153	46.1	318	24.8	-9	20.6	53	40.8	+23	33.2	18	50.0	+17	36.0	139	50.7	+3	06.3
13	168	48.6	333	25.4		21.7	68	41.5		33.1	33	51.9		35.8	154	53.3		06.3
14	183	51.1	348	25.9		22.8	83	42.2		33.0	48	53.8		35.7	169	55.9		06.2
15	198	53.5	3	26.4		24.0	98	42.9		32.9	63	55.7		35.5	184	58.5		06.2
16	213	56.0	18	27.0		25.1	113	43.7		32.9	78	57.7		35.4	200	01.0		06.1
17	228	58.5	33	27.5	-9	26.2	128	44.4	+23	32.8	93	59.6	+17	35.2	215	03.6	+3	06.0
18	244	00.9	48	28.1	-9	27.3	143	45.1	+23	32.7	109	01.5	+17	35.1	230	06.2	+3	06.0
19	259	03.4	63	28.6		28.4	158	45.8		32.6	124	03.4		34.9	245	08.7		05.9
20	274	05.8	78	29.2		29.5	173	46.5		32.5	139	05.4		34.8	260	11.3		05.9
21	289	08.3	93	29.7		30.6	188	47.2		32.5	154	07.3		34.6	275	13.9		05.8
22	304	10.8	108	30.3		31.7	203	47.9		32.4	169	09.2		34.5	290	16.5		05.8
23	319	13.2	123	30.8		32.9	218	48.6		32.3	184	11.1		34.4	305	19.0		05.7
24	334	15.7	138	31.4	-9	34.0	233	49.4	+23	32.2	199	13.1	+17	34.2	320	21.6	+3	05.7
Dif	—		+5		-11		+7		-1		+19		-1		+26		-	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 01.8 ^m				Edad: 13.3 ^d SD: 15 ^h 0 PMG: 23 ^h 08 ^m PHE { 4 ^h : 55/2 12 ^h : 55/3 20 ^h : 55/5 Rº: 46 ^m															
	hG ☉	Dec			hG ☾	Dif			Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	m	
0	179	30.5	+10	28.5	23	41.1	-20	17.9	106	60 N	19 21	20 08	21 10	19 07	2	1 52	94			
1	194	30.6		27.7	38	12.7	-20	07.3	106	58	15	19 59	20 55	18 56	6	2 06	90			
2	209	30.8		26.8	52	44.3	-19	56.7	106	56	10	50	42	47	9	19	85			
3	224	31.0		25.9	67	16.1		46.0	107	54	05	43	31	39	12	30	82			
4	239	31.2		25.1	81	47.8		35.2	108	52	19 01	37	22	32	14	40	78			
5	254	31.4	+10	24.2	96	19.6	-19	24.3	109	50	18 57	19 31	20 13	18 25	17	2 48	76			
6	269	31.5	+10	23.3	110	51.5	-19	13.3	110	45	18 48	19 19	19 56	18 10	23	3 06	71			
7	284	31.7		22.5	125	23.4	-19	02.2	111	40	41	09	43	17 59	26	21	67			
8	299	31.9		21.6	139	55.3	-18	51.0	112	35	35	19 01	32	48	30	33	64			
9	314	32.1		20.7	154	27.3		39.7	113	30	30	18 54	23	39	33	3 44	61			
10	329	32.2		19.9	168	59.3		28.4	113	20	20	43	19 09	24	38	4 03	55			
11	344	32.4	+10	19.0	183	31.4	-18	16.9	115	10 N	18 12	18 34	18 59	17 10	42	4 19	51			
12	359	32.6	+10	18.1	198	03.5	-18	05.3	116	0	18 05	18 26	18 51	16 57	47	4 33	47			
13	14	32.8		17.2	212	35.7	-17	53.7	116	10 S	17 58	19	44	45	50	4 48	43			
14	29	33.0		16.4	227	07.9		42.0	117	20	50	13	38	31	55	5 04	39			
15	44	33.1		15.5	241	40.2		30.2	118	30	42	06	34	15	60	22	34			
16	59	33.3		14.6	256	12.4		18.3	119	35	37	18 03	32	16 06	63	32	31			
17	74	33.5	+10	13.8	270	44.8	-17	06.3	120	40	17 31	17 59	18 30	15 55	67	5 44	27			
18	89	33.7	+10	12.9	285	17.2	-16	54.3	120	45	17 25	17 55	18 29	15 42	71	5 57	24			
19	104	33.8		12.0	299	49.6		42.1	122	50	17	50	28	27	76	6 14	19			
20	119	34.0		11.1	314	22.0		29.9	122	52	14	48	28	20	79	22	16			
21	134	34.2		10.3	328	54.5		17.6	123	54	10	46	27	12	82	31	13			
22	149	34.4		09.4	343	27.1	-16	05.2	124	56	06	44	27	15 03	85	40	11			
23	164	34.6		08.5	357	59.6	-15	52.7	125	58	17 01	42	27	14 53	89	6 51	7			
24	179	34.7	+10	07.7	12	32.3	-15	40.2	125	60 S	16 56	17 39	18 27	14 41	93	7 04	3			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG 1 ^h 42.7 ^m			Mag: -4.6 PMG: 14 ^h 45 ^m			Mag: +1.2 PMG: 8 ^h 24 ^m			Mag: -1.8 PMG: 10 ^h 42 ^m			Mag: +0.5 PMG: 2 ^h 38 ^m							
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	334	15.7	138	31.4	-9	34.0	233	49.4	+23	32.2	199	13.1	+17	34.2	320	21.6	+3	05.7		
1	349	18.2	153	32.0		35.1	248	50.1		32.2	214	15.0		34.1	335	24.2		05.6		
2	4	20.6	168	32.5		36.2	263	50.8		32.1	229	16.9		33.9	350	26.7		05.6		
3	19	23.1	183	33.1		37.3	278	51.5		32.0	244	18.8		33.8	5	29.3		05.5		
4	34	25.6	198	33.6		38.4	293	52.2		31.9	259	20.8		33.6	20	31.9		05.4		
5	49	28.0	213	34.2	-9	39.5	308	52.9	+23	31.8	274	22.7	+17	33.5	35	34.5	+3	05.4		
6	64	30.5	228	34.7	-9	40.6	323	53.6	+23	31.8	289	24.6	+17	33.3	50	37.0	+3	05.3		
7	79	33.0	243	35.3		41.7	338	54.3		31.7	304	26.5		33.2	65	39.6		05.3		
8	94	35.4	258	35.9		42.8	353	55.1		31.6	319	28.5		33.0	80	42.2		05.2		
9	109	37.9	273	36.4		43.9	8	55.8		31.5	334	30.4		32.9	95	44.8		05.2		
10	124	40.3	288	37.0		45.0	23	56.5		31.4	349	32.3		32.7	110	47.3		05.1		
11	139	42.8	303	37.6	-9	46.2	38	57.2	+23	31.3	4	34.2	+17	32.6	125	49.9	+3	05.1		
12	154	45.3	318	38.1	-9	47.3	53	57.9	+23	31.3	19	36.2	+17	32.5	140	52.5	+3	05.0		
13	169	47.7	333	38.7		48.4	68	58.6		31.2	34	38.1		32.3	155	55.0		04.9		
14	184	50.2	348	39.2		49.5	83	59.4		31.1	49	40.0		32.2	170	57.6		04.9		
15	199	52.7	3	39.8		50.6	99	00.1		31.0	64	41.9		32.0	186	00.2		04.8		
16	214	55.1	18	40.4		51.7	114	00.8		30.9	79	43.9		31.9	201	02.8		04.8		
17	229	57.6	33	41.0	-9	52.8	129	01.5	+23	30.8	94	45.8	+17	31.7	216	05.3	+3	04.7		
18	245	00.1	48	41.5	-9	53.9	144	02.2	+23	30.8	109	47.7	+17	31.6	231	07.9	+3	04.7		
19	260	02.5	63	42.1		55.0	159	02.9		30.7	124	49.7		31.4	246	10.5		04.6		
20	275	05.0	78	42.7		56.1	174	03.7		30.6	139	51.6		31.3	261	13.1		04.5		
21	290	07.5	93	43.2		57.2	189	04.4		30.5	154	53.5		31.1	276	15.6		04.5		
22	305	09.9	108	43.8		58.3	204	05.1		30.4	169	55.4		31.0	291	18.2		04.4		
23	320	12.4	123	44.4	-9	59.4	219	05.8		30.3	184	57.4		30.8	306	20.8		04.4		
24	335	14.8	138	45.0	-10	00.5	234	06.5	+23	30.3	199	59.3	+17	30.7	321	23.4	+3	04.3		
Dif	—			+6			-11			+7			-1			+26			-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG:12 ^h 01.5 ^m			Edad: 14.3 ^d SD: 15 ^h 1 PMG: 23 ^h 53 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	34.7	+10	07.7	12	32.3	-15	40.2	60 N	2 54	3 56	4 43	19 07	0	3 25	91
1	194	34.9		06.8	27	04.9		27.6	58	3 09	4 06	49	19 01	3	35	87
2	209	35.1		05.9	41	37.6		14.9	56	22	14	54	18 55	6	43	83
3	224	35.3		05.0	56	10.3	-15	02.1	54	33	21	4 59	50	9	50	81
4	239	35.5		04.2	70	43.1	-14	49.3	52	43	27	5 03	45	12	3 57	77
5	254	35.7	+10	03.3	85	15.9	-14	36.4	50	3 51	4 33	5 07	18 41	13	4 03	75
6	269	35.8	+10	02.4	99	48.7	-14	23.4	45	4 08	4 45	5 16	18 31	19	4 16	69
7	284	36.0		01.5	114	21.6	-14	10.3	40	21	4 55	23	23	23	26	66
8	299	36.2	+10	00.6	128	54.5	-13	57.2	35	32	5 03	29	17	26	35	62
9	314	36.4	+9	59.8	143	27.4		44.0	30	41	10	34	11	29	43	59
10	329	36.6		58.9	158	00.4		30.7	20	4 54	21	43	18	00	35	4 57
11	344	36.7	+9	58.0	172	33.4	-13	17.4	10 N	5 05	5 30	5 51	17 51	39	5 08	49
12	359	36.9	+9	57.1	187	06.4	-13	04.0	0	5 13	5 37	5 58	17 42	44	5 19	44
13	14	37.1		56.3	201	39.5	-12	50.5	10 S	19	44	6 05	34	48	30	40
14	29	37.3		55.4	216	12.6		37.0	20	25	50	13	24	53	41	36
15	44	37.5		54.5	230	45.7		23.4	30	29	5 57	21	14	58	5 54	30
16	59	37.7		53.6	245	18.8	-12	09.7	35	31	6 00	26	07	62	6 02	27
17	74	37.8	+9	52.8	259	52.0	-11	56.0	40	5 32	6 04	6 31	17 00	66	6 10	24
18	89	38.0	+9	51.9	274	25.2	-11	42.2	45	5 34	6 08	6 38	16 52	70	6 20	19
19	104	38.2		51.0	288	58.4		28.3	50	35	12	45	42	75	32	14
20	119	38.4		50.1	303	31.7		14.4	52	35	14	48	37	78	37	12
21	134	38.6		49.2	318	05.0	-11	00.5	54	35	16	52	32	80	43	10
22	149	38.8		48.4	332	38.3	-10	46.4	56	35	18	6 56	27	83	50	7
23	164	38.9		47.5	347	11.6		32.4	58	35	21	7 01	20	87	6 57	4
24	179	39.1	+9	46.6	1	44.9	-10	18.2	60 S	5 35	6 23	7 06	16 13	90	7 05	0

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 38.7 ^m		Mag: -4.6 PMG: 14 ^h 44 ^m			Mag: +1.2 PMG: 8 ^h 23 ^m			Mag: -1.8 PMG: 10 ^h 39 ^m			Mag: +0.5 PMG: 2 ^h 34 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	335	14.8	138	45.0	-10	00.5	234	06.5	+23	30.3	199	59.3	+17	30.7	321	23.4	+3	04.3
1	350	17.3	153	45.5		01.6	249	07.2		30.2	215	01.2		30.6	336	25.9		04.3
2	5	19.8	168	46.1		02.7	264	08.0		30.1	230	03.1		30.4	351	28.5		04.2
3	20	22.2	183	46.7		03.8	279	08.7		30.0	245	05.1		30.3	6	31.1		04.2
4	35	24.7	198	47.3		04.9	294	09.4		29.9	260	07.0		30.1	21	33.7		04.1
5	50	27.2	213	47.9	-10	06.0	309	10.1	+23	29.8	275	08.9	+17	30.0	36	36.2	+3	04.0
6	65	29.6	228	48.4	-10	07.1	324	10.8	+23	29.7	290	10.8	+17	29.8	51	38.8	+3	04.0
7	80	32.1	243	49.0		08.2	339	11.6		29.6	305	12.8		29.7	66	41.4		03.9
8	95	34.6	258	49.6		09.3	354	12.3		29.6	320	14.7		29.5	81	44.0		03.9
9	110	37.0	273	50.2		10.4	9	13.0		29.5	335	16.6		29.4	96	46.6		03.8
10	125	39.5	288	50.8		11.5	24	13.7		29.4	350	18.6		29.2	111	49.1		03.8
11	140	41.9	303	51.4	-10	12.6	39	14.4	+23	29.3	5	20.5	+17	29.1	126	51.7	+3	03.7
12	155	44.4	318	51.9	-10	13.7	54	15.1	+23	29.2	20	22.4	+17	29.0	141	54.3	+3	03.6
13	170	46.9	333	52.5		14.7	69	15.9		29.1	35	24.3		28.8	156	56.9		03.6
14	185	49.3	348	53.1		15.8	84	16.6		29.0	50	26.3		28.7	171	59.4		03.5
15	200	51.8	3	53.7		16.9	99	17.3		28.9	65	28.2		28.5	187	02.0		03.5
16	215	54.3	18	54.3		18.0	114	18.0		28.8	80	30.1		28.4	202	04.6		03.4
17	230	56.7	33	54.9	-10	19.1	129	18.8	+23	28.7	95	32.0	+17	28.2	217	07.2	+3	03.4
18	245	59.2	48	55.5	-10	20.2	144	19.5	+23	28.6	110	34.0	+17	28.1	232	09.7	+3	03.3
19	261	01.7	63	56.1		21.3	159	20.2		28.6	125	35.9		27.9	247	12.3		03.2
20	276	04.1	78	56.7		22.4	174	20.9		28.5	140	37.8		27.8	262	14.9		03.2
21	291	06.6	93	57.3		23.5	189	21.6		28.4	155	39.8		27.6	277	17.5		03.1
22	306	09.1	108	57.9		24.6	204	22.4		28.3	170	41.7		27.5	292	20.1		03.1
23	321	11.5	123	58.5		25.7	219	23.1		28.2	185	43.6		27.3	307	22.6		03.0
24	336	14.0	138	59.1	-10	26.8	234	23.8	+23	28.1	200	45.5	+17	27.2	322	25.2	+3	03.0
Dif	—		+6		-11		+7		-1		+19		-1		+26		-	

UT	SOL		LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG:12 ^h 01.2 ^m		Edad: 15.3 ^d PHE { 4 ^h : 56/2 12 ^h : 56/3 20 ^h : 56/5 R°: **m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	m	h m	m
0	179 39.1	+9 46.6	1 44.9		-10 18.2		60 N	19 16	20 01	21 02	19 07	1	4 56	92
1	194 39.3		16 18.3 ¹⁴⁴		-10 04.0 ¹⁴²		58	10	19 53	20 48	04	4	5 02	88
2	209 39.5		30 51.7 ¹⁴⁴		-9 49.8 ¹⁴²		56	05	45	36	19 01	8	06	85
3	224 39.7		45 25.1 ¹⁴⁴			35.5 ¹⁴³	54	19 00	38	25	18 59	10	11	81
4	239 39.9		59 58.5 ¹⁴⁴			21.2 ¹⁴³	52	18 56	32	16	57	12	14	79
5	254 40.0	+9 42.2	74 31.9 ¹⁴⁴		-9 06.8 ¹⁴⁴		50	18 53	19 27	20 08	18 54	15	5 18	76
6	269 40.2	+9 41.3	89 05.4 ¹⁴⁵		-8 52.3 ¹⁴⁵		45	18 45	19 15	19 52	18 50	19	5 25	72
7	284 40.4		103 38.9 ¹⁴⁵			37.8 ¹⁴⁵	40	38	19 06	39	46	24	32	67
8	299 40.6		118 12.4 ¹⁴⁵			23.3 ¹⁴⁵	35	32	18 58	29	43	27	37	63
9	314 40.8		132 45.9 ¹⁴⁵		-8 08.7 ¹⁴⁶		30	27	52	21	40	30	42	60
10	329 41.0		147 19.4 ¹⁴⁵		-7 54.1 ¹⁴⁶		20	19	41	19 07	35	35	50	54
11	344 41.2	+9 36.9	161 52.9 ¹⁴⁵		-7 39.4 ¹⁴⁷		10 N	18 11	18 33	18 58	18 30	41	5 57	49
12	359 41.3	+9 36.0	176 26.4 ¹⁴⁵		-7 24.7 ¹⁴⁷		0	18 05	18 25	18 50	18 26	45	6 03	45
13	14 41.5		191 00.0 ¹⁴⁶		-7 09.9 ¹⁴⁸		10 S	17 58	19	44	22	50	10	40
14	29 41.7		205 33.5 ¹⁴⁵		-6 55.1 ¹⁴⁸		20	51	13	39	17	55	17	35
15	44 41.9		220 07.1 ¹⁴⁶			40.2 ¹⁴⁹	30	43	07	35	12	60	24	31
16	59 42.1		234 40.7 ¹⁴⁶			25.4 ¹⁴⁸	35	38	04	33	09	64	29	27
17	74 42.3	+9 31.6	249 14.2 ¹⁴⁵		-6 10.4 ¹⁵⁰		40	17 33	18 01	18 32	18 06	67	6 34	23
18	89 42.5	+9 30.7	263 47.8 ¹⁴⁶		-5 55.5 ¹⁴⁹		45	17 27	17 57	18 31	18 02	71	6 39	20
19	104 42.7		278 21.4 ¹⁴⁶			40.5 ¹⁵⁰	50	20	53	31	17	57	46	15
20	119 42.8		292 55.0 ¹⁴⁶			25.5 ¹⁵⁰	52	17	51	31	55	79	49	13
21	134 43.0		307 28.6 ¹⁴⁶		-5 10.4 ¹⁵¹		54	14	50	31	52	82	53	10
22	149 43.2		322 02.2 ¹⁴⁶		-4 55.3 ¹⁵¹		56	10	48	31	50	85	6 57	7
23	164 43.4		336 35.8 ¹⁴⁶			40.2 ¹⁵¹	58	05	46	31	47	88	7 01	4
24	179 43.6	+9 25.4	351 09.4 ¹⁴⁶		-4 25.0 ¹⁵²		60 S	17 01	17 43	18 31	17 43	92	7 05	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 1 ^h 34.8 ^m		Mag: -4.6 PMG: 14 ^h 43 ^m		Mag: +1.2 PMG: 8 ^h 22 ^m		Mag: -1.8 PMG: 10 ^h 36 ^m		Mag: +0.5 PMG: 2 ^h 30 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	
0	336 14.0	138 59.1	-10 26.8		234 23.8	+23 28.1	200 45.5	+17 27.2	322 25.2	+3 03.0	
1	351 16.4	153 59.7		27.8	249 24.5		215 47.5		337 27.8		02.9
2	6 18.9	169 00.3		28.9	264 25.2		230 49.4		352 30.4		02.8
3	21 21.4	184 00.9		30.0	279 26.0		245 51.3		7 33.0		02.8
4	36 23.8	199 01.5		31.1	294 26.7		260 53.3		22 35.5		02.7
5	51 26.3	214 02.1	-10 32.2		309 27.4	+23 27.6	275 55.2	+17 26.5	37 38.1	+3 02.7	
6	66 28.8	229 02.7	-10 33.3		324 28.1	+23 27.5	290 57.1	+17 26.3	52 40.7	+3 02.6	
7	81 31.2	244 03.3		34.4	339 28.9		305 59.0		67 43.3		02.6
8	96 33.7	259 03.9		35.5	354 29.6		321 01.0		82 45.8		02.5
9	111 36.2	274 04.5		36.5	9 30.3		336 02.9		97 48.4		02.4
10	126 38.6	289 05.1		37.6	24 31.0		351 04.8		112 51.0		02.4
11	141 41.1	304 05.7	-10 38.7		39 31.8	+23 27.0	6 06.8	+17 25.6	127 53.6	+3 02.3	
12	156 43.5	319 06.3	-10 39.8		54 32.5	+23 26.9	21 08.7	+17 25.4	142 56.2	+3 02.3	
13	171 46.0	334 06.9		40.9	69 33.2		36 10.6		157 58.7		02.2
14	186 48.5	349 07.5		42.0	84 33.9		51 12.6		173 01.3		02.2
15	201 50.9	4 08.1		43.0	99 34.7		66 14.5		188 03.9		02.1
16	216 53.4	19 08.7		44.1	114 35.4		81 16.4		203 06.5		02.0
17	231 55.9	34 09.4	-10 45.2		129 36.1	+23 26.5	96 18.3	+17 24.7	218 09.1	+3 02.0	
18	246 58.3	49 10.0	-10 46.3		144 36.8	+23 26.4	111 20.3	+17 24.6	233 11.7	+3 01.9	
19	262 00.8	64 10.6		47.4	159 37.6		126 22.2		248 14.2		01.9
20	277 03.3	79 11.2		48.4	174 38.3		141 24.1		263 16.8		01.8
21	292 05.7	94 11.8		49.5	189 39.0		156 26.1		278 19.4		01.7
22	307 08.2	109 12.4		50.6	204 39.7		171 28.0		293 22.0		01.7
23	322 10.7	124 13.1		51.7	219 40.5		186 29.9		308 24.6		01.6
24	337 13.1	139 13.7	-10 52.7		234 41.2	+23 25.8	201 31.9	+17 23.7	323 27.1	+3 01.6	
Dif	—	+6	-11		+7	-1	+19	-1	+26		-1

UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 00.9 ^m			Edad: 16.3 ^d PHE { 4 ^h : 56'7 12 ^h : 56'9 20 ^h : 57'0 PMG: 0 ^h 36 ^m R°: 44 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	43.6	+9	25.4	351	09.4	146	-4	25.0	152	3	01	4	02	4	48	19	07
1	194	43.8		24.5	5	43.0	146	-4	09.8	152	15	11		53		07	3	28
2	209	44.0		23.6	20	16.5	145	-3	54.6	152	27	18	4	58	07	6	30	84
3	224	44.2		22.7	34	50.1	146		39.3	153	38	25	5	03	07	9	31	81
4	239	44.3		21.8	49	23.7	146		24.1	152	47	31		07	07	12	32	78
5	254	44.5	+9	20.9	63	57.3	146	-3	08.8	153	3	55	4	36	5	10	19	08
6	269	44.7	+9	20.1	78	30.8	145	-2	53.5	153	4	11	4	48	5	18	19	08
7	284	44.9		19.2	93	04.4	146		38.1	154	23	4	57	25	08	23	37	67
8	299	45.1		18.3	107	38.0	146		22.7	154	34	5	04	30	08	27	39	63
9	314	45.3		17.4	122	11.5	145	-2	07.3	154	42	11	35	09	29	40	60	
10	329	45.5		16.5	136	45.0	145	-1	51.9	154	4	55	21	44	09	35	43	53
11	344	45.7	+9	15.6	151	18.5	145	-1	36.5	154	5	05	5	30	5	51	19	09
12	359	45.9	+9	14.7	165	52.0	145	-1	21.1	154	5	12	5	37	5	58	19	10
13	14	46.0		13.8	180	25.5	145	-1	05.6	155	18	43	6	04	10	49	49	39
14	29	46.2		12.9	194	59.0	145	-0	50.1	155	23	49	11	11	54	51	34	
15	44	46.4		12.0	209	32.5	145		34.6	155	27	55	19	11	60	53	29	
16	59	46.6		11.2	224	05.9	144		19.1	155	28	5	58	23	11	64	54	26
17	74	46.8	+9	10.3	238	39.3	144	-0	03.6	155	5	30	6	01	6	28	19	12
18	89	47.0	+9	09.4	253	12.7	144	+0	11.9	155	5	30	6	04	6	34	19	12
19	104	47.2		08.5	267	46.1	144		27.5	156	31	08	41	13	77	7	00	13
20	119	47.4		07.6	282	19.5	144		43.0	155	31	10	44	13	79	00	11	
21	134	47.6		06.7	296	52.8	143	+0	58.6	156	31	12	47	13	82	01	9	
22	149	47.8		05.8	311	26.1	143	+1	14.1	155	30	13	51	13	86	02	6	
23	164	48.0		04.9	325	59.4	143		29.7	156	30	15	6	55	14	88	04	2
24	179	48.1	+9	04.0	340	32.6	142	+1	45.3	156	5	30	6	18	7	00	19	14
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 1 ^h 30.9 ^m			Mag: -4.6 PMG: 14 ^h 42 ^m			Mag: +1.2 PMG: 8 ^h 21 ^m			Mag: -1.8 PMG: 10 ^h 33 ^m			Mag: +0.5 PMG: 2 ^h 26 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	337	13.1	139	13.7	-10	52.7	234	41.2	+23	25.8	201	31.9	+17	23.7	323	27.1		
1	352	15.6	154	14.3		53.8	249	41.9		25.7	216	33.8		23.5	338	29.7		
2	7	18.0	169	14.9		54.9	264	42.7		25.6	231	35.7		23.4	353	32.3		
3	22	20.5	184	15.6		56.0	279	43.4		25.5	246	37.6		23.2	8	34.9		
4	37	23.0	199	16.2		57.1	294	44.1		25.4	261	39.6		23.1	23	37.5		
5	52	25.4	214	16.8	-10	58.1	309	44.8	+23	25.3	276	41.5	+17	23.0	38	40.0		
6	67	27.9	229	17.4	-10	59.2	324	45.6	+23	25.2	291	43.4	+17	22.8	53	42.6		
7	82	30.4	244	18.1	-11	00.3	339	46.3		25.1	306	45.4		22.7	68	45.2		
8	97	32.8	259	18.7		01.4	354	47.0		24.9	321	47.3		22.5	83	47.8		
9	112	35.3	274	19.3		02.4	9	47.8		24.8	336	49.2		22.4	98	50.4		
10	127	37.8	289	20.0		03.5	24	48.5		24.7	351	51.2		22.2	113	53.0		
11	142	40.2	304	20.6	-11	04.6	39	49.2	+23	24.6	6	53.1	+17	22.1	128	55.5		
12	157	42.7	319	21.2	-11	05.6	54	49.9	+23	24.5	21	55.0	+17	21.9	143	58.1		
13	172	45.1	334	21.9		06.7	69	50.7		24.4	36	57.0		21.8	159	00.7		
14	187	47.6	349	22.5		07.8	84	51.4		24.3	51	58.9		21.6	174	03.3		
15	202	50.1	4	23.1		08.9	99	52.1		24.2	67	00.8		21.5	189	05.9		
16	217	52.5	19	23.8		09.9	114	52.9		24.1	82	02.7		21.3	204	08.5		
17	232	55.0	34	24.4	-11	11.0	129	53.6	+23	24.0	97	04.7	+17	21.2	219	11.0		
18	247	57.5	49	25.0	-11	12.1	144	54.3	+23	23.9	112	06.6	+17	21.1	234	13.6		
19	262	59.9	64	25.7		13.1	159	55.1		23.8	127	08.5		20.9	249	16.2		
20	278	02.4	79	26.3		14.2	174	55.8		23.7	142	10.5		20.8	264	18.8		
21	293	04.9	94	27.0		15.3	189	56.5		23.6	157	12.4		20.6	279	21.4		
22	308	07.3	109	27.6		16.3	204	57.3		23.5	172	14.3		20.5	294	24.0		
23	323	09.8	124	28.2		17.4	219	58.0		23.4	187	16.3		20.3	309	26.6		
24	338	12.3	139	28.9	-11	18.5	234	58.7	+23	23.3	202	18.2	+17	20.2	324	29.1		
Dif	—		+6	-11			+7	-1			+19	-1			+26	-1		

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG:12 ^h 00.6 ^m			Edad: 17.3 ^d SD: 15 ^h 6 PMG: 1 ^h 20 ^m							PHE { 4 ^h : 57/2 12 ^h : 57/4 20 ^h : 57/5 R°: 47 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	48.1	+9	04.0	340	32.6	+1	45.3	60 N	19	10	19	55	20	54	19	06	
1	194	48.3		03.1	355	05.9	+2	00.9	58		04	47	41		10	5	56	
2	209	48.5		02.2	9	39.1		16.4	56	19	00	39	29		13	9	54	
3	224	48.7		01.3	24	12.2		32.0	54	18	56	33	20		16	12	52	
4	239	48.9	+9	00.4	38	45.4	+2	47.6	52		52	27	11		19	14	50	
5	254	49.1	+8	59.5	53	18.5	+3	03.2	50	18	48	19	22	20	03	19	21	
6	269	49.3	+8	58.7	67	51.5	+3	18.7	45	18	41	19	11	19	48	19	26	
7	284	49.5		57.8	82	24.6		34.3	40		35	19	03	36		31	26	
8	299	49.7		56.9	96	57.6	+3	49.9	35		30	18	55	26		35	29	
9	314	49.9		56.0	111	30.5	+4	05.4	30		25	49	18		38	33	40	
10	329	50.1		55.1	126	03.5		21.0	20		17	39	19	06		44	39	
11	344	50.3	+8	54.2	140	36.3	+4	36.5	10 N	18	10	18	32	18	56	19	49	
12	359	50.5	+8	53.3	155	09.2	+4	52.0	0	18	04	18	25	18	49	19	54	
13	14	50.6		52.4	169	42.0	+5	07.5	10 S	17	58	19		44		19	59	
14	29	50.8		51.5	184	14.8		23.0	20		51	13	39		20	05	58	
15	44	51.0		50.6	198	47.5		38.5	30		44	08	36		11	64	22	
16	59	51.2		49.7	213	20.1	+5	54.0	35		40	05	35		15	67	20	
17	74	51.4	+8	48.8	227	52.8	+6	09.5	40	17	35	18	02	18	34	20	19	
18	89	51.6	+8	47.9	242	25.3	+6	24.9	45	17	30	17	59	18	33	20	24	
19	104	51.8		47.0	256	57.9		40.3	50		23	56	33		30	81	13	
20	119	52.0		46.1	271	30.3	+6	55.7	52		20	55	34		32	84	11	
21	134	52.2		45.2	286	02.8	+7	11.1	54		17	53	34		35	87	10	
22	149	52.4		44.3	300	35.1		26.5	56		14	51	34		39	90	08	
23	164	52.6		43.4	315	07.5		41.8	58		10	50	35		42	94	06	
24	179	52.8	+8	42.5	329	39.7	+7	57.1	60 S	17	05	17	48	18	36	20	47	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 26.9 ^m		Mag: -4.6 PMG: 14 ^h 41 ^m		Mag: +1.2 PMG: 8 ^h 20 ^m		Mag: -1.8 PMG: 10 ^h 29 ^m		Mag: +0.5 PMG: 2 ^h 22 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	338	12.3	139	28.9	234	58.7	202	18.2	324	29.1
1	353	14.7	154	29.5	249	59.4	217	20.1	339	31.7
2	8	17.2	169	30.2	265	00.2	232	22.1	354	34.3
3	23	19.6	184	30.8	280	00.9	247	24.0	9	36.9
4	38	22.1	199	31.5	295	01.6	262	25.9	24	39.5
5	53	24.6	214	32.1	310	02.4	277	27.9	39	42.1
6	68	27.0	229	32.8	325	03.1	292	29.8	54	44.6
7	83	29.5	244	33.4	340	03.8	307	31.7	69	47.2
8	98	32.0	259	34.1	355	04.6	322	33.7	84	49.8
9	113	34.4	274	34.7	10	05.3	337	35.6	99	52.4
10	128	36.9	289	35.4	25	06.0	352	37.5	114	55.0
11	143	39.4	304	36.1	40	06.8	7	39.5	129	57.6
12	158	41.8	319	36.7	55	07.5	22	41.4	145	00.2
13	173	44.3	334	37.4	70	08.3	37	43.3	160	02.7
14	188	46.8	349	38.0	85	09.0	52	45.3	175	05.3
15	203	49.2	4	38.7	100	09.7	67	47.2	190	07.9
16	218	51.7	19	39.4	115	10.5	82	49.1	205	10.5
17	233	54.1	34	40.0	130	11.2	97	51.1	220	13.1
18	248	56.6	49	40.7	145	11.9	112	53.0	235	15.7
19	263	59.1	64	41.3	160	12.7	127	54.9	250	18.3
20	279	01.5	79	42.0	175	13.4	142	56.9	265	20.9
21	294	04.0	94	42.7	190	14.1	157	58.8	280	23.4
22	309	06.5	109	43.3	205	14.9	173	00.7	295	26.0
23	324	08.9	124	44.0	220	15.6	188	02.7	310	28.6
24	339	11.4	139	44.7	235	16.3	203	04.6	325	31.2
Dif	—		+7	-11	+7	-1	+19	-1	+26	-1

UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 00.3 ^m			Edad: 18.3 ^d PHE { 4 ^h : 57'7 12 ^h : 57'8 20 ^h : 58'0 PMG: 2 ^h 05 ^m R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	52.8	+8	42.5	329	39.7	+7	57.1	60 N	3	08	4	07	4	52	19	07	
1	194	53.0		41.6	344	11.9	+8	12.4	58	21	15	4	58	14	6	26	94	
2	209	53.2		40.7	358	44.1		27.6	56	32	22	5	02	20	10	20	91	
3	224	53.4		39.8	13	16.2		42.8	54	42	29	06	26	13	16	8	87	
4	239	53.6		38.9	27	48.2	+8	58.0	52	51	34	10	32	16	11	84		
5	254	53.8	+8	38.0	42	20.2	+9	13.2	50	3	58	4	40	5	13	19	36	
6	269	54.0	+8	37.1	56	52.1	+9	28.3	45	4	14	4	50	5	21	19	47	
7	284	54.2		36.2	71	23.9		43.4	40	26	4	59	27	19	55	29	52	
8	299	54.3		35.3	85	55.7	+9	58.4	35	35	5	06	32	20	03	32	46	
9	314	54.5		34.4	100	27.5	+10	13.4	30	43	12	36	10	35	41	63		
10	329	54.7		33.5	114	59.1		28.4	20	4	56	22	44	21	41	32	57	
11	344	54.9	+8	32.6	129	30.7	+10	43.3	10 N	5	05	5	30	5	51	20	31	
12	359	55.1	+8	31.7	144	02.2	+10	58.2	0	5	12	5	36	5	57	20	41	
13	14	55.3		30.8	158	33.7	+11	13.1	10 S	17	42	6	03	20	51	54	09	
14	29	55.5		29.9	173	05.0		27.9	20	22	47	09	21	01	60	8	01	
15	44	55.7		29.0	187	36.3		42.6	30	25	52	17	13	66	7	52	33	
16	59	55.9		28.1	202	07.6	+11	57.3	35	26	55	21	20	69	47	30		
17	74	56.1	+8	27.2	216	38.7	+12	12.0	40	5	27	5	58	6	25	21	29	
18	89	56.3	+8	26.3	231	09.8	+12	26.6	45	5	27	6	01	6	30	21	38	
19	104	56.5		25.4	245	40.8		41.1	50	27	04	37	49	83	27	16		
20	119	56.7		24.5	260	11.8	+12	55.6	52	27	05	40	21	55	86	23	14	
21	134	56.9		23.6	274	42.6	+13	10.0	54	26	07	43	22	01	89	19	11	
22	149	57.1		22.7	289	13.4		24.4	56	26	09	46	07	93	15	8		
23	164	57.3		21.8	303	44.1		38.8	58	25	10	50	15	97	10	4		
24	179	57.5	+8	20.9	318	14.7	+13	53.0	60 S	5	24	6	12	6	54	22	23	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 23.0 ^m		Mag: -4.6 PMG: 14 ^h 40 ^m		Mag: +1.2 PMG: 8 ^h 19 ^m		Mag: -1.8 PMG: 10 ^h 26 ^m		Mag: +0.5 PMG: 2 ^h 18 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	339	11.4	139	44.7	-11	43.9	235	16.3	+23	20.6
1	354	13.9	154	45.4		44.9	250	17.1		20.5
2	9	16.3	169	46.0		46.0	265	17.8		20.4
3	24	18.8	184	46.7		47.0	280	18.6		20.2
4	39	21.2	199	47.4		48.1	295	19.3		20.1
5	54	23.7	214	48.0	-11	49.1	310	20.0	+23	20.0
6	69	26.2	229	48.7	-11	50.2	325	20.8	+23	19.9
7	84	28.6	244	49.4		51.2	340	21.5		19.8
8	99	31.1	259	50.1		52.3	355	22.3		19.7
9	114	33.6	274	50.8		53.3	10	23.0		19.5
10	129	36.0	289	51.4		54.4	25	23.7		19.4
11	144	38.5	304	52.1	-11	55.4	40	24.5	+23	19.3
12	159	41.0	319	52.8	-11	56.5	55	25.2	+23	19.2
13	174	43.4	334	53.5		57.5	70	26.0		19.1
14	189	45.9	349	54.2		58.6	85	26.7		19.0
15	204	48.4	4	54.9	-11	59.6	100	27.4		18.8
16	219	50.8	19	55.5	-12	00.7	115	28.2		18.7
17	234	53.3	34	56.2	-12	01.7	130	28.9	+23	18.6
18	249	55.7	49	56.9	-12	02.7	145	29.7	+23	18.5
19	264	58.2	64	57.6		03.8	160	30.4		18.4
20	280	00.7	79	58.3		04.8	175	31.1		18.2
21	295	03.1	94	59.0		05.9	190	31.9		18.1
22	310	05.6	109	59.7		06.9	205	32.6		18.0
23	325	08.1	125	00.4		07.9	220	33.4		17.9
24	340	10.5	140	01.1	-12	09.0	235	34.1	+23	17.8
Dif	—		+7	-10			+7	-1		+19
										-1
										+26
										-1

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 00.0 ^m			Edad: 19.3 ^d PHE { 4 ^h : 58'1 12 ^h : 58'2 20 ^h : 58'4 SD: 15'8 PMG: 2 ^h 53 ^m R°: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /		° /		° /		°		h m	h m	h m	h m m		h m m			
0	179 57.5	+8 20.9		318 14.7	115	+13 53.0	142	60 N		19 04	19 48	20 46	19 08 6		11 11 107			
1	194 57.7	20.0		332 45.2		+14 07.2	142	58		18 59	41	34	20 11		11 00 101			
2	209 57.9	19.0		347 15.7	115		141	56		55	34	23	30 16		10 51 96			
3	224 58.1	18.1		1 46.0	113		140	54		51	28	14	39 20		43 9			
4	239 58.3	17.2		16 16.3	113	+14 49.5	139	52		47	22	20 06	48 23		35 89			
5	254 58.5	+8 16.3		30 46.5	112	+15 03.4	139	50		18 44	19 18	19 59	19 55 26		10 29 85			
6	269 58.7	+8 15.4		45 16.6	111	+15 17.3	139	45		18 37	19 08	19 44	20 11 31		10 14 80			
7	284 58.9	14.5		59 46.6	110		138	40		32	18 59	32	24 36		10 03 75			
8	299 59.1	13.6		74 16.5	109		137	35		27	53	23	35 40		9 53 71			
9	314 59.3	12.7		88 46.4	109	+15 58.5	137	30		23	47	16	20 45 43		44 68			
10	329 59.5	11.8		103 16.1	107	+16 12.1	136	20		15	38	19 04	21 02 48		29 63			
11	344 59.7	+8 10.9		117 45.7	106	+16 25.6	135	10 N		18 09	18 30	18 55	21 17 52		9 16 58			
12	359 59.9	+8 10.0		132 15.3	106	+16 39.0	134	0		18 03	18 24	18 48	21 31 56		9 04 54			
13	15 00.1	09.1		146 44.8	105	+16 52.3	133	10 S		17 58	19	43	21 45 60		8 53 49			
14	30 00.3	08.2		161 14.1	103	+17 05.6	132	20		52	14	40	22 01 64		40 44			
15	45 00.5	07.3		175 43.4	103		132	30		45	09	37	19 69		25 40			
16	60 00.7	06.4		190 12.6	102		131	35		41	07	36	29 72		17 36			
17	75 00.9	+8 05.4		204 41.7	101	+17 44.9	130	40		17 37	18 04	18 36	22 41 76		8 08 32			
18	90 01.1	+8 04.5		219 10.7	100	+17 57.8	129	45		17 32	18 02	18 36	22 55 80		7 56 29			
19	105 01.3	03.6		233 39.6	99	+18 10.7	129	50		26	17 59	36	23 12 87		43 23			
20	120 01.5	02.7		248 08.3	97		127	52		24	58	37	21 89		37 20			
21	135 01.7	01.8		262 37.0	97		127	54		21	56	37	30 93		30 17			
22	150 01.9	+8 00.9		277 05.6	96	+18 48.6	125	56		17	55	38	40 98		23 13			
23	165 02.1	+8 00.0		291 34.1	95	+19 01.1	125	58		14	54	39	23 52 103		14 9			
24	180 02.3	+7 59.1		306 02.5	94	+19 13.4	123	60 S		17 10	17 52	18 40	** ** *		7 05 3			
UT	ARIES PMG 1 ^h 19.1 ^m		VENUS Mag: -4.6 PMG: 14 ^h 39 ^m		MARTE Mag: +1.2 PMG: 8 ^h 17 ^m			JÚPITER Mag: -1.8 PMG: 10 ^h 23 ^m			SATURNO Mag: +0.5 PMG: 2 ^h 13 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /								
0	340 10.5	140 01.1	-12 09.0	235 34.1	+23 17.8	203 51.0	+17 13.2	326 33.3	+2 57.2									
1	355 13.0	155 01.8	10.0	250 34.8	17.6	218 53.0	13.0	341 35.9	57.2									
2	10 15.5	170 02.5	11.1	265 35.6	17.5	233 54.9	12.9	356 38.5	57.1									
3	25 17.9	185 03.2	12.1	280 36.3	17.4	248 56.8	12.7	11 41.1	57.0									
4	40 20.4	200 03.9	13.1	295 37.1	17.3	263 58.8	12.6	26 43.7	57.0									
5	55 22.8	215 04.6	-12 14.2	310 37.8	+23 17.1	279 00.7	+17 12.4	41 46.3	+2 56.9									
6	70 25.3	230 05.3	-12 15.2	325 38.6	+23 17.0	294 02.7	+17 12.3	56 48.9	+2 56.9									
7	85 27.8	245 06.0	16.3	340 39.3	16.9	309 04.6	12.1	71 51.5	56.8									
8	100 30.2	260 06.7	17.3	355 40.0	16.8	324 06.5	12.0	86 54.1	56.7									
9	115 32.7	275 07.4	18.3	10 40.8	16.7	339 08.5	11.8	101 56.7	56.7									
10	130 35.2	290 08.1	19.4	25 41.5	16.5	354 10.4	11.7	116 59.3	56.6									
11	145 37.6	305 08.8	-12 20.4	40 42.3	+23 16.4	9 12.3	+17 11.5	132 01.9	+2 56.5									
12	160 40.1	320 09.5	-12 21.4	55 43.0	+23 16.3	24 14.3	+17 11.4	147 04.4	+2 56.5									
13	175 42.6	335 10.2	22.5	70 43.8	16.2	39 16.2	11.2	162 07.0	56.4									
14	190 45.0	350 10.9	23.5	85 44.5	16.0	54 18.2	11.1	177 09.6	56.4									
15	205 47.5	5 11.7	24.5	100 45.3	15.9	69 20.1	11.0	192 12.2	56.3									
16	220 50.0	20 12.4	25.6	115 46.0	15.8	84 22.0	10.8	207 14.8	56.2									
17	235 52.4	35 13.1	-12 26.6	130 46.8	+23 15.6	99 24.0	+17 10.7	222 17.4	+2 56.2									
18	250 54.9	50 13.8	-12 27.6	145 47.5	+23 15.5	114 25.9	+17 10.5	237 20.0	+2 56.1									
19	265 57.3	65 14.5	28.6	160 48.2	15.4	129 27.8	10.4	252 22.6	56.0									
20	280 59.8	80 15.2	29.7	175 49.0	15.3	144 29.8	10.2	267 25.2	56.0									
21	296 02.3	95 16.0	30.7	190 49.7	15.1	159 31.7	10.1	282 27.8	55.9									
22	311 04.7	110 16.7	31.7	205 50.5	15.0	174 33.7	09.9	297 30.4	55.9									
23	326 07.2	125 17.4	32.8	220 51.2	14.9	189 35.6	09.8	312 33.0	55.8									
24	341 09.7	140 18.1	-12 33.8	235 52.0	+23 14.8	204 37.5	+17 09.6	327 35.6	+2 55.7									
Dif	—	+7	-10	+7	-1	+19	-1	+26	-1									

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 59.7 ^m			Edad: 20.3 ^d SD: 15'9 PMG: 3 ^h 44 ^m PHE 4^h: 58'5 12^h: 58'6 20^h: 58'7 R°: 55^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	02.3	+7	59.1	306	02.5	+19	13.4	60 N	3	14	4	12	4	57	19	12
1	195	02.5		58.2	320	30.8		25.7	58	27	20	5	02		30	19	40
2	210	02.7		57.3	334	59.0		37.9	56	37	27		06		45	24	25
3	225	02.9		56.3	349	27.0	+19	49.9	54	47	33	10	19	58	28	13	90
4	240	03.1		55.4	3	55.0	+20	01.9	52	3	55	38	13	20	09	32	12
5	255	03.3	+7	54.5	18	22.9	+20	13.7	50	4	02	4	43	5	16	20	20
6	270	03.5	+7	53.6	32	50.7	+20	25.5	45	4	16	4	53	5	23	20	41
7	285	03.7		52.7	47	18.3		37.1	40	28	5	01	29	20	59	43	16
8	300	03.9		51.8	61	45.9	+20	48.6	35	37		08	33	21	13	46	11
9	315	04.1		50.9	76	13.4	+21	00.0	30	44		13	37	26	49	10	51
10	330	04.3		50.0	90	40.7	+21	11.3	20	4	56	22	45	21	48	53	30
11	345	04.5	+7	49.0	105	08.0	+21	22.5	10 N	5	05	5	30	5	51	22	07
12	0	04.7	+7	48.1	119	35.1	+21	33.6	0	5	11	5	36	5	56	22	26
13	15	04.9		47.2	134	02.1		44.5	10 S	16		41	6	02	22	44	61
14	30	05.1		46.3	148	29.1	+21	55.3	20	20		46	08	23	03	65	23
15	45	05.3		45.4	162	55.9	+22	06.0	30	22		50	14	26	69	9	03
16	60	05.5		44.5	177	22.6		16.6	35	23		52	18	40	71	8	52
17	75	05.7	+7	43.6	191	49.2	+22	27.0	40	5	24	5	55	6	22	23	55
18	90	05.9	+7	42.6	206	15.7	+22	37.4	45	5	23	5	57	6	27	**	**
19	105	06.1		41.7	220	42.1		47.5	50	23		6	00	32	**	**	**
20	120	06.3		40.8	235	08.4	+22	57.6	52	22		01	35	**	**	**	**
21	135	06.5		39.9	249	34.6	+23	07.5	54	22		02	38	**	**	**	**
22	150	06.7		39.0	264	00.7		17.3	56	21		04	41	**	**	**	**
23	165	06.9		38.1	278	26.7		27.0	58	20		05	44	**	**	**	**
24	180	07.1	+7	37.2	292	52.6	+23	36.5	60 S	5	18	6	06	6	48	0	06

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 15.1 ^m		Mag: -4.6 PMG: 14 ^h 38 ^m		Mag: +1.2 PMG: 8 ^h 16 ^m		Mag: -1.8 PMG: 10 ^h 20 ^m		Mag: +0.5 PMG: 2 ^h 09 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	341	09.7	140	18.1	-12	33.8	235	52.0	+23	14.8
1	356	12.1	155	18.8		34.8	250	52.7		14.6
2	11	14.6	170	19.6		35.8	265	53.5		14.5
3	26	17.1	185	20.3		36.9	280	54.2		14.4
4	41	19.5	200	21.0		37.9	295	55.0		14.2
5	56	22.0	215	21.8	-12	38.9	310	55.7	+23	14.1
6	71	24.5	230	22.5	-12	39.9	325	56.5	+23	14.0
7	86	26.9	245	23.2		41.0	340	57.2		13.8
8	101	29.4	260	23.9		42.0	355	58.0		13.7
9	116	31.8	275	24.7		43.0	10	58.7		13.6
10	131	34.3	290	25.4		44.0	25	59.5		13.5
11	146	36.8	305	26.1	-12	45.0	41	00.2	+23	13.3
12	161	39.2	320	26.9	-12	46.1	56	01.0	+23	13.2
13	176	41.7	335	27.6		47.1	71	01.7		13.1
14	191	44.2	350	28.4		48.1	86	02.5		12.9
15	206	46.6	5	29.1		49.1	101	03.2		12.8
16	221	49.1	20	29.8		50.1	116	04.0		12.7
17	236	51.6	35	30.6	-12	51.1	131	04.7	+23	12.5
18	251	54.0	50	31.3	-12	52.2	146	05.5	+23	12.4
19	266	56.5	65	32.1		53.2	161	06.2		12.3
20	281	58.9	80	32.8		54.2	176	07.0		12.1
21	297	01.4	95	33.6		55.2	191	07.7		12.0
22	312	03.9	110	34.3		56.2	206	08.5		11.9
23	327	06.3	125	35.1		57.2	221	09.2		11.7
24	342	08.8	140	35.8	-12	58.2	236	10.0	+23	11.6
Dif	—		+7		-10		+8		-1	

UT	SOL			LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 59.4 ^m			Edad: 21.3 ^d SD: 16'0 PMG: 4 ^h 39 ^m						PHE { 4 ^h : 58'9 12 ^h : 59'0 20 ^h : 59'1 R°: 61 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180 07.1	+7 37.2	292 52.6	68	+23 36.5	94	60 N	18 58	19 42	20 39	19 23 29	14 46 102			
1	195 07.3		307 18.4	66	+23 45.9	92	58	53	35	27	19 49 38	20 93			
2	210 07.5		321 44.0	66	+23 55.1	91	56	49	28	17	20 09 43	14 00 88			
3	225 07.7		336 09.6	65	+24 04.2	89	54	46	23	08	26 47	13 43 85			
4	240 08.0		350 35.1	63	+24 13.1	89	52	43	18	20 01	41 49	29 82			
5	255 08.2	+7 32.6	5 00.4	63	+24 22.0	89	50	18 40	19 13	19 54	20 54 50	13 17 79			
6	270 08.4	+7 31.7	19 25.7	63	+24 30.6	86	45	18 34	19 04	19 40	21 21 53	12 51 76			
7	285 08.6		33 50.9	62	+24 39.1	85	40	28	18 56	29	42 55	30 74			
8	300 08.8		48 15.9	60	+24 47.5	84	35	24	50	20	21 59 58	12 14 71			
9	315 09.0		62 40.9	60	+24 55.7	82	30	20	44	13	22 15 58	11 59 69			
10	330 09.2		77 05.8	59	+25 03.7	80	20	14	36	19 02	22 41 60	34 67			
11	345 09.4	+7 27.1	91 30.5	57	+25 11.6	79	10 N	18 08	18 29	18 54	23 03 62	11 13 64			
12	0 09.6	+7 26.2	105 55.2	57	+25 19.4	78	0	18 03	18 23	18 48	23 24 64	10 53 62			
13	15 09.8		120 19.8	56	+25 27.0	76	10 S	17 57	19	43	23 45 65	33 60			
14	30 10.0		134 44.3	55	+25 34.4	74	20	52	14	40	** ** *	10 12 57			
15	45 10.2		149 08.7	54	+25 41.6	72	30	46	10	38	** ** *	9 48 54			
16	60 10.4		163 33.0	53	+25 48.7	71	35	43	08	37	** ** *	33 53			
17	75 10.6	+7 21.6	177 57.2	52	+25 55.7	70	40	17 39	18 06	18 37	** ** *	9 17 50			
18	90 10.8	+7 20.6	192 21.3	51	+26 02.5	68	45	17 34	18 04	18 38	0 14 79	8 57 47			
19	105 11.0		206 45.4	51	+26 09.1	66	50	29	02	39	37 84	33 42			
20	120 11.2		221 09.3	49	+26 15.5	64	52	27	01	40	0 49 86	21 40			
21	135 11.4		235 33.2	49	+26 21.8	63	54	24	18 00	41	1 01 90	8 08 36			
22	150 11.6		249 56.9	47	+26 27.9	61	56	21	17 59	42	16 94	7 52 33			
23	165 11.8		264 20.6	47	+26 33.8	59	58	18	58	43	34 100	34 27			
24	180 12.1	+7 15.1	278 44.3	47	+26 39.5	57	60 S	17 14	17 56	18 45	1 56 110	7 12 16			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 1 ^h 11.2 ^m		Mag: -4.6 PMG: 14 ^h 37 ^m		Mag: +1.2 PMG: 8 ^h 15 ^m		Mag: -1.8 PMG: 10 ^h 17 ^m		Mag: +0.5 PMG: 2 ^h 05 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	342 08.8	140 35.8	-12 58.2	236 10.0	+23 11.6	205 24.1	+17 06.1	328 37.8	+2 54.2	
1	357 11.3	155 36.6	-12 59.3	251 10.7	11.5	220 26.0	06.0	343 40.4	54.1	
2	12 13.7	170 37.3	-13 00.3	266 11.5	11.3	235 28.0	05.8	358 43.0	54.1	
3	27 16.2	185 38.1	01.3	281 12.2	11.2	250 29.9	05.7	13 45.6	54.0	
4	42 18.7	200 38.8	02.3	296 13.0	11.0	265 31.8	05.5	28 48.2	54.0	
5	57 21.1	215 39.6	-13 03.3	311 13.7	+23 10.9	280 33.8	+17 05.4	43 50.8	+2 53.9	
6	72 23.6	230 40.4	-13 04.3	326 14.5	+23 10.8	295 35.7	+17 05.2	58 53.4	+2 53.8	
7	87 26.1	245 41.1	05.3	341 15.3	10.6	310 37.7	05.1	73 56.0	53.8	
8	102 28.5	260 41.9	06.3	356 16.0	10.5	325 39.6	05.0	88 58.6	53.7	
9	117 31.0	275 42.6	07.3	11 16.8	10.4	340 41.5	04.8	104 01.2	53.6	
10	132 33.4	290 43.4	08.3	26 17.5	10.2	355 43.5	04.7	119 03.8	53.6	
11	147 35.9	305 44.2	-13 09.3	41 18.3	+23 10.1	10 45.4	+17 04.5	134 06.4	+2 53.5	
12	162 38.4	320 44.9	-13 10.3	56 19.0	+23 09.9	25 47.4	+17 04.4	149 09.0	+2 53.4	
13	177 40.8	335 45.7	11.4	71 19.8	09.8	40 49.3	04.2	164 11.6	53.4	
14	192 43.3	350 46.5	12.4	86 20.5	09.7	55 51.2	04.1	179 14.2	53.3	
15	207 45.8	5 47.2	13.4	101 21.3	09.5	70 53.2	03.9	194 16.8	53.2	
16	222 48.2	20 48.0	14.4	116 22.1	09.4	85 55.1	03.8	209 19.4	53.2	
17	237 50.7	35 48.8	-13 15.4	131 22.8	+23 09.3	100 57.1	+17 03.6	224 22.0	+2 53.1	
18	252 53.2	50 49.5	-13 16.4	146 23.6	+23 09.1	115 59.0	+17 03.5	239 24.6	+2 53.1	
19	267 55.6	65 50.3	17.4	161 24.3	09.0	131 00.9	03.3	254 27.2	53.0	
20	282 58.1	80 51.1	18.4	176 25.1	08.8	146 02.9	03.2	269 29.8	52.9	
21	298 00.6	95 51.9	19.4	191 25.8	08.7	161 04.8	03.1	284 32.4	52.9	
22	313 03.0	110 52.6	20.4	206 26.6	08.5	176 06.8	02.9	299 35.0	52.8	
23	328 05.5	125 53.4	21.4	221 27.4	08.4	191 08.7	02.8	314 37.6	52.7	
24	343 07.9	140 54.2	-13 22.4	236 28.1	+23 08.3	206 10.7	+17 02.6	329 40.2	+2 52.7	
Dif	—	+8	-10	+8	-1	+19	-1	+26	-1	

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 59.0 ^m			Edad: 22.3 ^d PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/3 PMG: 5 ^h 39 ^m R°: 62 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	12.1	+7	15.1	278	44.3	+26	39.5	60 N	3 21	4 17	5 02	19 51	67	16 26 65	
1	195	12.3		14.2	293	07.8		45.1	58	32	25	06	20 25	67	15 52 65	
2	210	12.5		13.3	307	31.3		50.5	56	42	31	10	20 51	66	26 66	
3	225	12.7		12.4	321	54.6	+26	55.8	54	51	37	13	21 11	67	15 06 65	
4	240	12.9		11.4	336	18.0	+27	00.8	52	3 59	41	17	28 66		14 49 65	
5	255	13.1	+7	10.5	350	41.2	+27	05.7	50	4 05	4 46	5 19	21 43	66	14 35 65	
6	270	13.3	+7	09.6	5	04.4	+27	10.4	45	4 19	4 55	5 25	22 13	65	14 05 65	
7	285	13.5		08.7	19	27.5		14.9	40	30	5 03	30	36 65		13 42 65	
8	300	13.7		07.7	33	50.5		19.2	35	39	09	35	22 55	65	23 65	
9	315	13.9		06.8	48	13.5		23.3	30	46	14	39	23 12	64	13 07 64	
10	330	14.1		05.9	62	36.4		27.3	20	4 57	23	45	23 40	64	12 39 64	
11	345	14.3	+7	05.0	76	59.2	+27	31.1	10 N	5 05	5 29	5 51	** ** *		12 16 63	
12	0	14.5	+7	04.1	91	22.0	+27	34.7	0	5 11	5 35	5 56	** ** *		11 54 62	
13	15	14.7		03.1	105	44.8		38.1	10 S	15	40	6 01	** ** *		32 62	
14	30	14.9		02.2	120	07.4		41.3	20	18	44	06	0 08	65	11 08 62	
15	45	15.2		01.3	134	30.1		44.3	30	20	48	12	35 66		10 40 61	
16	60	15.4	+7	00.4	148	52.7		47.1	35	20	50	15	0 51	67	24 61	
17	75	15.6	+6	59.4	163	15.2	+27	49.8	40	5 20	5 52	6 19	1 09	69	10 05 60	
18	90	15.8	+6	58.5	177	37.7	+27	52.2	45	5 20	5 54	6 23	1 31	71	9 43 58	
19	105	16.0		57.6	192	00.1		54.5	50	19	56	28	2 00	72	9 14 57	
20	120	16.2		56.7	206	22.5		56.6	52	18	57	31	14 73		8 59 57	
21	135	16.4		55.7	220	44.9	+27	58.4	54	17	58	33	30 75		43 55	
22	150	16.6		54.8	235	07.3	+28	00.1	56	16	5 59	36	2 49	77	8 23 54	
23	165	16.8		53.9	249	29.6		01.6	58	14	6 00	39	3 13	80	7 59 50	
24	180	17.0	+6	53.0	263	51.8	+28	02.9	60 S	5 13	6 01	6 42	3 45	87	7 27 44	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 1 ^h 07.3 ^m		Mag: -4.7 PMG: 14 ^h 36 ^m		Mag: +1.2 PMG: 8 ^h 14 ^m		Mag: -1.8 PMG: 10 ^h 14 ^m		Mag: +0.5 PMG: 2 ^h 01 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	343	07.9	140	54.2	-13	22.4	236	28.1	+23	08.3						
1	358	10.4	155	55.0		23.4	251	28.9		08.1						
2	13	12.9	170	55.8		24.4	266	29.6		08.0						
3	28	15.3	185	56.6		25.4	281	30.4		07.8						
4	43	17.8	200	57.3		26.4	296	31.1		07.7						
5	58	20.3	215	58.1	-13	27.3	311	31.9	+23	07.6						
6	73	22.7	230	58.9	-13	28.3	326	32.7	+23	07.4						
7	88	25.2	245	59.7		29.3	341	33.4		07.3						
8	103	27.7	261	00.5		30.3	356	34.2		07.1						
9	118	30.1	276	01.3		31.3	11	34.9		07.0						
10	133	32.6	291	02.1		32.3	26	35.7		06.8						
11	148	35.1	306	02.9	-13	33.3	41	36.5	+23	06.7						
12	163	37.5	321	03.7	-13	34.3	56	37.2	+23	06.5						
13	178	40.0	336	04.5		35.3	71	38.0		06.4						
14	193	42.4	351	05.3		36.3	86	38.7		06.3						
15	208	44.9	6	06.1		37.3	101	39.5		06.1						
16	223	47.4	21	06.9		38.2	116	40.3		06.0						
17	238	49.8	36	07.7	-13	39.2	131	41.0	+23	05.8						
18	253	52.3	51	08.5	-13	40.2	146	41.8	+23	05.7						
19	268	54.8	66	09.3		41.2	161	42.6		05.5						
20	283	57.2	81	10.1		42.2	176	43.3		05.4						
21	298	59.7	96	10.9		43.2	191	44.1		05.2						
22	314	02.2	111	11.7		44.2	206	44.8		05.1						
23	329	04.6	126	12.5		45.1	221	45.6		04.9						
24	344	07.1	141	13.3	-13	46.1	236	46.4	+23	04.8						
Dif	—		+8		-10		+8		-1		+19		-1		+26	

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15'9 PMG: 11 ^h 58.7 ^m			Edad: 23.3 ^d SD: 16'2 PMG: 6 ^h 41 ^m			PHE { 4 ^h : 59'4 12 ^h : 59'4 20 ^h : 59'5 Rº: 65 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	h	m		
0	180	17.0	+6	53.0	263	51.8	33	+28	02.9	11	60 N	18	52	19	35	20	31	20	58	
1	195	17.2		52.0	278	14.1	32		04.0	9	58	48	29	20	21	32	96	16	57	
2	210	17.4		51.1	292	36.3	32		04.9	7	56	44	23	11	21	57	90	32	42	
3	225	17.7		50.2	306	58.5	32		05.6	6	54	41	18	20	22	18	86	16	11	
4	240	17.9		49.3	321	20.7	32		06.2	3	52	38	13	19	55	34	84	15	54	
5	255	18.1	+6	48.3	335	42.9	32	+28	06.5	1	50	18	36	19	09	22	49	81	15	40
6	270	18.3	+6	47.4	350	05.0	31	+28	06.6	1	45	18	30	19	00	23	18	78	15	10
7	285	18.5		46.5	4	27.2	32		06.5	2	40	25	18	53	25	23	41	75	14	47
8	300	18.7		45.5	18	49.3	31		06.3	5	35	21	47	17	**	**	**		28	57
9	315	18.9		44.6	33	11.4	31		05.8	7	30	18	42	10	**	**	**		14	11
10	330	19.1		43.7	47	33.5	31		05.1	8	20	12	34	19	**	**	**		13	43
11	345	19.3	+6	42.8	61	55.7	32	+28	04.3	11	10 N	18	07	18	28	0	04	65	13	19
12	0	19.5	+6	41.8	76	17.8	31	+28	03.2	13	0	18	02	18	23	0	26	65	12	56
13	15	19.7		40.9	90	39.9	31		01.9	14	10 S	17	57	18	43	0	49	64	34	66
14	30	20.0		40.0	105	02.0	31	+28	00.5	16	20	53	15	40	1	13	63	12	10	
15	45	20.2		39.0	119	24.2	32	+27	58.9	19	30	47	11	39	41	63		11	41	
16	60	20.4		38.1	133	46.3	31		57.0	20	35	44	09	39	1	58	62	25	70	
17	75	20.6	+6	37.2	148	08.5	32	+27	55.0	23	40	17	41	18	08	2	18	61	11	05
18	90	20.8	+6	36.3	162	30.7	32	+27	52.7	24	45	17	37	18	06	2	42	59	10	41
19	105	21.0		35.3	176	52.9	32		50.3	26	50	32	05	42	3	12	58	10	11	
20	120	21.2		34.4	191	15.1	32		47.7	28	52	30	04	43	27	57		9	56	
21	135	21.4		33.5	205	37.4	33		44.9	31	54	28	03	44	3	45	56	38	78	
22	150	21.6		32.5	219	59.7	33		41.8	32	56	25	02	45	4	06	54	9	17	
23	165	21.8		31.6	234	22.0	33		38.6	34	58	22	02	47	4	33	51	8	49	
24	180	22.1	+6	30.7	248	44.3	33	+27	35.2		60 S	17	19	18	01	5	12	44	8	11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 1 ^h 03.4 ^m		Mag: -4.7 PMG: 14 ^h 34 ^m		Mag: +1.2 PMG: 8 ^h 12 ^m		Mag: -1.8 PMG: 10 ^h 11 ^m		Mag: +0.5 PMG: 1 ^h 57 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	344	07.1	141	13.3	-13	46.1	236	46.4	+23	04.8
1	359	09.5	156	14.1		47.1	251	47.1		04.6
2	14	12.0	171	14.9		48.1	266	47.9		04.5
3	29	14.5	186	15.8		49.1	281	48.7		04.3
4	44	16.9	201	16.6		50.1	296	49.4		04.2
5	59	19.4	216	17.4	-13	51.0	311	50.2	+23	04.0
6	74	21.9	231	18.2	-13	52.0	326	51.0	+23	03.9
7	89	24.3	246	19.0		53.0	341	51.7		03.7
8	104	26.8	261	19.9		54.0	356	52.5		03.6
9	119	29.3	276	20.7		54.9	11	53.3		03.4
10	134	31.7	291	21.5		55.9	26	54.0		03.3
11	149	34.2	306	22.3	-13	56.9	41	54.8	+23	03.1
12	164	36.7	321	23.1	-13	57.9	56	55.5	+23	03.0
13	179	39.1	336	24.0		58.8	71	56.3		02.8
14	194	41.6	351	24.8	-13	59.8	86	57.1		02.7
15	209	44.0	6	25.6	-14	00.8	101	57.8		02.5
16	224	46.5	21	26.5		01.8	116	58.6		02.4
17	239	49.0	36	27.3	-14	02.7	131	59.4	+23	02.2
18	254	51.4	51	28.1	-14	03.7	147	00.2	+23	02.1
19	269	53.9	66	29.0		04.7	162	00.9		01.9
20	284	56.4	81	29.8		05.7	177	01.7		01.8
21	299	58.8	96	30.6		06.6	192	02.5		01.6
22	315	01.3	111	31.5		07.6	207	03.2		01.5
23	330	03.8	126	32.3		08.6	222	04.0		01.3
24	345	06.2	141	33.2	-14	09.5	237	04.8	+23	01.1
Dif	—		+8		-10		+8		-2	
							+19		-1	
									+26	
									-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 58.4 ^m			Edad: 24.3 ^d SD: 16'2 PMG: 7 ^h 44 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	22.1	+6	30.7	248	44.3	+27	35.2	60 N	3 27	4 23	5 07	22 41 113	17 58 10		
1	195	22.3		29.7	263	06.7	34	31.6	58	38	29	10	23 06 104	33 18		
2	210	22.5		28.8	277	29.1	34	27.9	56	47	35	14	26 98	17 12 25		
3	225	22.7		27.9	291	51.6	35	23.9	54	3 55	40	17	42 94	16 56 28		
4	240	22.9		27.0	306	14.1	35	19.7	52	4 03	45	20	23 57 89	41 32		
5	255	23.1	+6	26.0	320	36.6	35	+27 15.3	50	4 09	4 49	5 22	** ** *	16 28 35		
6	270	23.3	+6	25.1	334	59.2	36	+27 10.8	45	4 22	4 58	5 28	** ** *	16 02 40		
7	285	23.5		24.2	349	21.8	36	06.1	40	32	5 05	32	** ** *	15 41 44		
8	300	23.7		23.2	3	44.5	37	+27 01.1	35	40	11	36	0 00 71	23 47		
9	315	24.0		22.3	18	07.3	38	+26 56.0	30	47	15	40	16 70	15 08 50		
10	330	24.2		21.4	32	30.1	38	50.7	20	4 57	23	45	0 44 66	14 42 54		
11	345	24.4	+6	20.4	46	52.9	38	+26 45.3	10 N	5 05	5 29	5 50	1 07 64	14 20 57		
12	0	24.6	+6	19.5	61	15.8	39	+26 39.6	0	5 10	5 34	5 55	1 29 62	13 59 60		
13	15	24.8		18.6	75	38.8	40	33.7	10 S	14	38	6 00	1 51 60	38 63		
14	30	25.0		17.6	90	01.9	41	27.7	20	17	42	04	2 15 57	13 15 67		
15	45	25.2		16.7	104	25.0	41	21.5	30	18	45	09	42 54	12 49 70		
16	60	25.4		15.8	118	48.1	41	15.1	35	18	47	12	2 59 51	33 73		
17	75	25.6	+6	14.8	133	11.4	43	+26 08.5	40	5 17	5 49	6 16	3 17 49	12 15 76		
18	90	25.9	+6	13.9	147	34.7	43	+26 01.8	45	5 16	5 50	6 19	3 40 45	11 53 79		
19	105	26.1		13.0	161	58.1	44	+25 54.9	50	14	52	24	4 09 41	25 84		
20	120	26.3		12.0	176	21.5	44	47.8	52	13	52	26	23 38	11 11 87		
21	135	26.5		11.1	190	45.1	46	40.5	54	12	53	28	39 35	10 55 91		
22	150	26.7		10.2	205	08.7	46	33.1	56	11	54	31	4 59 30	36 95		
23	165	26.9		09.2	219	32.4	47	25.5	58	09	54	33	5 23 24	10 12 102		
24	180	27.1	+6	08.3	233	56.1	47	+25 17.7	60 S	5 07	5 55	6 36	5 54 15	9 41 112		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 0 ^h 59.4 ^m		Mag: -4.7 PMG: 14 ^h 33 ^m		Mag: +1.2 PMG: 8 ^h 11 ^m		Mag: -1.8 PMG: 10 ^h 08 ^m		Mag: +0.5 PMG: 1 ^h 53 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	345	06.2	141	33.2	-14	09.5	237	04.8	+23	01.1	207	44.0	+16	55.6	331	45.1	+2	49.5
1	0	08.7	156	34.0		10.5	252	05.5		01.0	222	45.9		55.4	346	47.7		49.4
2	15	11.2	171	34.9		11.5	267	06.3		00.8	237	47.9		55.3	1	50.3		49.4
3	30	13.6	186	35.7		12.4	282	07.1		00.7	252	49.8		55.2	16	52.9		49.3
4	45	16.1	201	36.6		13.4	297	07.8		00.5	267	51.8		55.0	31	55.5		49.2
5	60	18.5	216	37.4	-14	14.4	312	08.6	+23	00.4	282	53.7	+16	54.9	46	58.1	+2	49.2
6	75	21.0	231	38.3	-14	15.3	327	09.4	+23	00.2	297	55.7	+16	54.7	62	00.7	+2	49.1
7	90	23.5	246	39.1		16.3	342	10.2	+23	00.1	312	57.6		54.6	77	03.3		49.0
8	105	25.9	261	40.0		17.2	357	10.9	+22	59.9	327	59.6		54.4	92	05.9		49.0
9	120	28.4	276	40.8		18.2	12	11.7		59.7	343	01.5		54.3	107	08.5		48.9
10	135	30.9	291	41.7		19.2	27	12.5		59.6	358	03.5		54.1	122	11.1		48.8
11	150	33.3	306	42.5	-14	20.1	42	13.2	+22	59.4	13	05.4	+16	54.0	137	13.7	+2	48.8
12	165	35.8	321	43.4	-14	21.1	57	14.0	+22	59.3	28	07.4	+16	53.8	152	16.3	+2	48.7
13	180	38.3	336	44.3		22.0	72	14.8		59.1	43	09.3		53.7	167	18.9		48.6
14	195	40.7	351	45.1		23.0	87	15.6		58.9	58	11.3		53.5	182	21.5		48.6
15	210	43.2	6	46.0		24.0	102	16.3		58.8	73	13.2		53.4	197	24.2		48.5
16	225	45.7	21	46.8		24.9	117	17.1		58.6	88	15.2		53.3	212	26.8		48.4
17	240	48.1	36	47.7	-14	25.9	132	17.9	+22	58.5	103	17.1	+16	53.1	227	29.4	+2	48.4
18	255	50.6	51	48.6	-14	26.8	147	18.6	+22	58.3	118	19.0	+16	53.0	242	32.0	+2	48.3
19	270	53.0	66	49.4		27.8	162	19.4		58.2	133	21.0		52.8	257	34.6		48.2
20	285	55.5	81	50.3		28.7	177	20.2		58.0	148	22.9		52.7	272	37.2		48.2
21	300	58.0	96	51.2		29.7	192	21.0		57.8	163	24.9		52.5	287	39.8		48.1
22	316	00.4	111	52.1		30.6	207	21.7		57.7	178	26.8		52.4	302	42.4		48.0
23	331	02.9	126	52.9		31.6	222	22.5		57.5	193	28.8		52.2	317	45.0		48.0
24	346	05.4	141	53.8	-14	32.5	237	23.3	+22	57.3	208	30.7	+16	52.1	332	47.6	+2	47.9
Dif	—		+9		-10		+8		-2		+19		-1		+26		-	

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG:11 ^h 58.0 ^m			Edad: 25.3 ^d SD: 16'2 PMG: 8 ^h 45 ^m PHE { 4 ^h : 59'5 12 ^h : 59'5 20 ^h : 59'5 Rº: 58 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	27.1	+6	08.3	233	56.1	+25	17.7	60 N	18 46	19 29	20 24	** ** *	18 08	6	
1	195	27.3		07.4	248	20.0		09.7	58	42	23	13	** ** *	17 51	11	
2	210	27.6		06.4	262	43.9	+25	01.6	56	39	17	20 05	** ** *	37	16	
3	225	27.8		05.5	277	08.0	+24	53.3	54	36	12	19 57	** ** *	24	20	
4	240	28.0		04.6	291	32.1		44.9	52	34	08	50	** ** *	13	23	
5	255	28.2	+6	03.6	305	56.3	+24	36.3	50	18 31	19 04	19 44	0 09	88	26	
6	270	28.4	+6	02.7	320	20.5	+24	27.5	45	18 26	18 56	19 32	0 34	83	32	
7	285	28.6		01.7	334	44.9		18.6	40	22	49	22	0 55	78	36	
8	300	28.8	+6	00.8	349	09.4		09.5	35	18	44	14	1 11	75	40	
9	315	29.0	+5	59.9	3	33.9	+24	00.3	30	15	40	19 08	26	72	43	
10	330	29.3		58.9	17	58.6	+23	50.9	20	10	32	18 58	1 50	67	48	
11	345	29.5	+5	58.0	32	23.3	+23	41.3	10 N	18 05	18 27	18 51	2 11	63	53	
12	0	29.7	+5	57.1	46	48.1	+23	31.6	0	18 01	18 22	18 46	2 31	59	57	
13	15	29.9		56.1	61	13.1		21.7	10 S	17 57	18	43	2 51	55	62	
14	30	30.1		55.2	75	38.1		11.7	20	53	15	41	3 12	51	66	
15	45	30.3		54.2	90	03.2	+23	01.6	30	48	12	40	36	46	72	
16	60	30.5		53.3	104	28.4	+22	51.3	35	46	11	40	3 50	44	75	
17	75	30.8	+5	52.4	118	53.7	+22	40.9	40	17 43	18 10	18 41	4 06	40	78	
18	90	31.0	+5	51.4	133	19.2	+22	30.3	45	17 39	18 08	18 42	4 25	36	83	
19	105	31.2		50.5	147	44.7		19.6	50	35	07	45	4 50	30	90	
20	120	31.4		49.6	162	10.3	+22	08.7	52	33	07	46	5 01	27	93	
21	135	31.6		48.6	176	36.0	+21	57.7	54	31	07	48	14	24	96	
22	150	31.8		47.7	191	01.8		46.6	56	29	06	49	29	20	101	
23	165	32.0		46.7	205	27.7		35.4	58	26	06	51	5 47	14	106	
24	180	32.3	+5	45.8	219	53.7	+21	24.0	60 S	17 24	18 05	18 54	6 09	7	114	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 0 ^h 55.5 ^m		Mag: -4.7 PMG: 14 ^h 32 ^m		Mag: +1.2 PMG: 8 ^h 10 ^m		Mag: -1.8 PMG: 10 ^h 05 ^m		Mag: +0.4 PMG: 1 ^h 49 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	346	05.4	141	53.8	-14	32.5	237	23.3	+22	57.3						
1	1	07.8	156	54.7		33.5	252	24.1		57.2						
2	16	10.3	171	55.6		34.4	267	24.8		57.0						
3	31	12.8	186	56.4		35.4	282	25.6		56.9						
4	46	15.2	201	57.3		36.3	297	26.4		56.7						
5	61	17.7	216	58.2	-14	37.3	312	27.2	+22	56.5						
6	76	20.2	231	59.1	-14	38.2	327	27.9	+22	56.4						
7	91	22.6	247	00.0		39.2	342	28.7		56.2						
8	106	25.1	262	00.9		40.1	357	29.5		56.1						
9	121	27.5	277	01.8		41.1	372	30.3		55.9						
10	136	30.0	292	02.7		42.0	387	31.1		55.7						
11	151	32.5	307	03.5	-14	43.0	402	31.8	+22	55.6						
12	166	34.9	322	04.4	-14	43.9	417	32.6	+22	55.4						
13	181	37.4	337	05.3		44.8	432	33.4		55.2						
14	196	39.9	352	06.2		45.8	447	34.2		55.1						
15	211	42.3	7	07.1		46.7	462	34.9		54.9						
16	226	44.8	22	08.0		47.7	477	35.7		54.7						
17	241	47.3	37	08.9	-14	48.6	492	36.5	+22	54.6						
18	256	49.7	52	09.8	-14	49.5	507	37.3	+22	54.4						
19	271	52.2	67	10.7		50.5	522	38.1		54.2						
20	286	54.6	82	11.6		51.4	537	38.8		54.1						
21	301	57.1	97	12.5		52.3	552	39.6		53.9						
22	316	59.6	112	13.5		53.3	567	40.4		53.7						
23	332	02.0	127	14.4		54.2	582	41.2		53.6						
24	347	04.5	142	15.3	-14	55.2	597	42.0	+22	53.4						
Dif	—		+9		-9		+8		-2							
									+20							
									-1							
									+26							
									-1							

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG:11 ^h 57.7 ^m			Edad: 26.3 ^d SD: 16'2 PMG: 9 ^h 42 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	32.3	+5	45.8	219	53.7	71	+21	24.0	115	60 N	3 33	4 28	5 11	0 34 109	18 12 2
1	195	32.5		44.9	234	19.8	72		12.5	117	58	43	34	15	0 50 103	18 01 6
2	210	32.7		43.9	248	46.0	74	+21	00.8	118	56	3 52	39	18	1 04 98	17 51 10
3	225	32.9		43.0	263	12.4	74	+20	49.0	118	54	4 00	44	21	16 93	43 13
4	240	33.1		42.0	277	38.8	75		37.2	118	52	06	48	23	26 90	35 16
5	255	33.3	+5	41.1	292	05.3	75	+20	25.1	121	50	4 12	4 52	5 25	1 36 87	17 28 19
6	270	33.5	+5	40.2	306	31.9	76	+20	13.0	121	45	4 25	5 00	5 30	1 55 81	17 12 25
7	285	33.8		39.2	320	58.6	77	+20	00.7	123	40	34	07	34	2 11 76	17 00 29
8	300	34.0		38.3	335	25.4	78	+19	48.4	123	35	42	12	38	25 72	16 49 33
9	315	34.2		37.3	349	52.4	80		35.9	125	30	48	17	41	36 69	40 36
10	330	34.4		36.4	4	19.4	80		23.3	126	20	4 58	24	46	2 56 63	23 42
11	345	34.6	+5	35.5	18	46.5	81	+19	10.6	127	10 N	5 05	5 29	5 50	3 13 58	16 09 47
12	0	34.8	+5	34.5	33	13.7	82	+18	57.8	128	0	5 10	5 34	5 54	3 29 54	15 55 52
13	15	35.0		33.6	47	41.0	83		44.8	130	10 S	13	37	5 58	3 45 49	41 57
14	30	35.3		32.6	62	08.4	84		31.8	130	20	15	40	6 02	4 02 44	26 62
15	45	35.5		31.7	76	36.0	86		18.7	131	30	15	43	07	21 39	15 09 68
16	60	35.7		30.8	91	03.6	86	+18	05.4	133	35	15	44	10	32 36	14 59 71
17	75	35.9	+5	29.8	105	31.3	87	+17	52.1	133	40	5 14	5 45	6 12	4 45 32	14 48 75
18	90	36.1	+5	28.9	119	59.1	88	+17	38.7	134	45	5 13	5 46	6 16	5 00 27	14 34 80
19	105	36.3		27.9	134	27.0	89		25.1	136	50	10	47	20	18 22	17 86
20	120	36.6		27.0	148	55.0	90	+17	11.5	136	52	09	48	21	27 19	09 89
21	135	36.8		26.0	163	23.1	91	+16	57.8	137	54	07	48	23	37 15	14 00 93
22	150	37.0		25.1	177	51.3	92		44.0	138	56	06	48	26	5 48 11	13 50 97
23	165	37.2		24.2	192	19.6	93		30.1	139	58	03	49	28	6 00 7	39 101
24	180	37.4	+5	23.2	206	48.0	94	+16	16.1	140	60 S	5 01	5 49	6 31	6 14 2	13 25 107

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 51.6 ^m		Mag: -4.7 PMG: 14 ^h 30 ^m			Mag: +1.2 PMG: 8 ^h 09 ^m			Mag: -1.8 PMG: 10 ^h 02 ^m			Mag: +0.4 PMG: 1 ^h 44 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	347	04.5	142	15.3	-14	55.2	237	42.0	+22	53.4	209	17.5	+16	48.6	333	50.2	+2	46.3
1	2	07.0	157	16.2		56.1	252	42.7		53.2	224	19.5		48.4	348	52.8		46.2
2	17	09.4	172	17.1		57.0	267	43.5		53.1	239	21.4		48.3	3	55.4		46.1
3	32	11.9	187	18.0		58.0	282	44.3		52.9	254	23.4		48.1	18	58.0		46.1
4	47	14.4	202	18.9		58.9	297	45.1		52.7	269	25.4		48.0	34	00.6		46.0
5	62	16.8	217	19.8	-14	59.8	312	45.9	+22	52.6	284	27.3	+16	47.9	49	03.3	+2	45.9
6	77	19.3	232	20.8	-15	00.7	327	46.6	+22	52.4	299	29.3	+16	47.7	64	05.9	+2	45.8
7	92	21.8	247	21.7		01.7	342	47.4		52.2	314	31.2		47.6	79	08.5		45.8
8	107	24.2	262	22.6		02.6	357	48.2		52.1	329	33.2		47.4	94	11.1		45.7
9	122	26.7	277	23.5		03.5	12	49.0		51.9	344	35.1		47.3	109	13.7		45.6
10	137	29.1	292	24.5		04.5	27	49.8		51.7	359	37.1		47.1	124	16.3		45.6
11	152	31.6	307	25.4	-15	05.4	42	50.6	+22	51.5	14	39.0	+16	47.0	139	18.9	+2	45.5
12	167	34.1	322	26.3	-15	06.3	57	51.3	+22	51.4	29	41.0	+16	46.8	154	21.5	+2	45.4
13	182	36.5	337	27.2		07.2	72	52.1		51.2	44	42.9		46.7	169	24.1		45.4
14	197	39.0	352	28.2		08.2	87	52.9		51.0	59	44.9		46.5	184	26.8		45.3
15	212	41.5	7	29.1		09.1	102	53.7		50.9	74	46.8		46.4	199	29.4		45.2
16	227	43.9	22	30.0		10.0	117	54.5		50.7	89	48.8		46.2	214	32.0		45.2
17	242	46.4	37	31.0	-15	10.9	132	55.3	+22	50.5	104	50.7	+16	46.1	229	34.6	+2	45.1
18	257	48.9	52	31.9	-15	11.8	147	56.0	+22	50.3	119	52.7	+16	46.0	244	37.2	+2	45.0
19	272	51.3	67	32.9		12.8	162	56.8		50.2	134	54.6		45.8	259	39.8		45.0
20	287	53.8	82	33.8		13.7	177	57.6		50.0	149	56.6		45.7	274	42.4		44.9
21	302	56.3	97	34.7		14.6	192	58.4		49.8	164	58.5		45.5	289	45.0		44.8
22	317	58.7	112	35.7		15.5	207	59.2		49.7	180	00.5		45.4	304	47.6		44.7
23	333	01.2	127	36.6		16.4	223	00.0		49.5	195	02.5		45.2	319	50.3		44.7
24	348	03.6	142	37.6	-15	17.4	238	00.8	+22	49.3	210	04.4	+16	45.1	334	52.9	+2	44.6
Dif	—		+9	-9			+8	-2			+20	-1			+26	-1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57.3 ^m			Edad: 27.3 ^d SD: 16'1 PMG: 10 ^h 35 ^m PHE { 4 ^h : 59'2 12 ^h : 59'0 20 ^h : 58'9 Rº: 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	° /	° /	° /	° /	° /	° /	° /	h m	h m	h m	h m m	h m m	h m m	
0	180 37.4	+5 23.2	206 48.0	95	+16 16.1	140	60 N	18 40	19 23	20 17	2 23 104	18 14 1		
1	195 37.6	22.3	221 16.5	96	+16 02.1	142	58	36	17	20 07	33 99	07 6		
2	210 37.8	21.3	235 45.1	96	+15 47.9	142	56	34	12	19 59	42 95	18 01 9		
3	225 38.1	20.4	250 13.7	96	33.7	142	54	31	07	51	49 92	17 56 12		
4	240 38.3	19.4	264 42.5	98	19.4	143	52	29	03	45	2 56 89	51 15		
5	255 38.5	+5 18.5	279 11.4	99	+15 05.0	144	50	18 27	19 00	19 39	3 03 85	17 47 17		
6	270 38.7	+5 17.6	293 40.3	99	+14 50.5	145	45	18 22	18 52	19 28	3 16 80	17 37 22		
7	285 38.9	16.6	308 09.3	100	36.0	145	40	19	46	18	27 75	29 27		
8	300 39.1	15.7	322 38.4	101	21.4	146	35	16	41	11	37 70	22 31		
9	315 39.4	14.7	337 07.7	103	+14 06.7	147	30	13	37	19 05	45 67	16 34		
10	330 39.6	13.8	351 36.9	102	+13 51.9	148	20	08	30	18 56	3 59 61	17 05 40		
11	345 39.8	+5 12.8	6 06.3	104	+13 37.1	148	10 N	18 04	18 25	18 50	4 11 56	16 56 45		
12	0 40.0	+5 11.9	20 35.8	105	+13 22.2	149	0	18 01	18 21	18 45	4 23 51	16 47 49		
13	15 40.2	10.9	35 05.3	105	+13 07.3	149	10 S	17 57	18	43	34 46	38 54		
14	30 40.4	10.0	49 35.0	107	+12 52.3	150	20	53	15	41	4 46 41	28 60		
15	45 40.7	09.1	64 04.7	107	37.2	151	30	49	13	41	5 00 35	17 66		
16	60 40.9	08.1	78 34.5	108	22.1	151	35	47	12	42	08 32	10 70		
17	75 41.1	+5 07.2	93 04.4	109	+12 06.9	152	40	17 44	18 11	18 43	5 17 28	16 03 73		
18	90 41.3	+5 06.2	107 34.3	109	+11 51.6	153	45	17 41	18 11	18 45	5 27 24	15 54 78		
19	105 41.5	05.3	122 04.4	111	36.4	152	50	38	10	48	40 18	43 84		
20	120 41.7	04.3	136 34.5	111	21.0	154	52	36	10	49	46 15	38 87		
21	135 42.0	03.4	151 04.7	112	+11 05.6	154	54	35	10	51	52 13	33 90		
22	150 42.2	02.4	165 34.9	112	+10 50.2	154	56	33	10	53	5 59 10	27 93		
23	165 42.4	01.5	180 05.3	114	34.7	155	58	31	10	55	6 07 6	20 97		
24	180 42.6	+5 00.5	194 35.7	114	+10 19.2	155	60 S	17 28	18 10	18 58	6 16 2	15 12 102		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 0 ^h 47.6 ^m		Mag: -4.7 PMG: 14 ^h 29 ^m		Mag: +1.2 PMG: 8 ^h 08 ^m		Mag: -1.8 PMG: 9 ^h 58 ^m		Mag: +0.4 PMG: 1 ^h 40 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	348 03.6	142 37.6	-15 17.4	238 00.8	+22 49.3	210 04.4	+16 45.1	334 52.9	+2 44.6	
1	3 06.1	157 38.5	18.3	253 01.6	49.1	225 06.4	44.9	349 55.5	44.5	
2	18 08.6	172 39.5	19.2	268 02.3	49.0	240 08.3	44.8	4 58.1	44.5	
3	33 11.0	187 40.4	20.1	283 03.1	48.8	255 10.3	44.6	20 00.7	44.4	
4	48 13.5	202 41.4	21.0	298 03.9	48.6	270 12.2	44.5	35 03.3	44.3	
5	63 16.0	217 42.3	-15 21.9	313 04.7	+22 48.4	285 14.2	+16 44.4	50 05.9	+2 44.3	
6	78 18.4	232 43.3	-15 22.8	328 05.5	+22 48.3	300 16.1	+16 44.2	65 08.5	+2 44.2	
7	93 20.9	247 44.3	23.8	343 06.3	48.1	315 18.1	44.1	80 11.2	44.1	
8	108 23.4	262 45.2	24.7	358 07.1	47.9	330 20.0	43.9	95 13.8	44.0	
9	123 25.8	277 46.2	25.6	13 07.9	47.7	345 22.0	43.8	110 16.4	44.0	
10	138 28.3	292 47.1	26.5	28 08.6	47.6	0 23.9	43.6	125 19.0	43.9	
11	153 30.7	307 48.1	-15 27.4	43 09.4	+22 47.4	15 25.9	+16 43.5	140 21.6	+2 43.8	
12	168 33.2	322 49.1	-15 28.3	58 10.2	+22 47.2	30 27.9	+16 43.3	155 24.2	+2 43.8	
13	183 35.7	337 50.0	29.2	73 11.0	47.0	45 29.8	43.2	170 26.8	43.7	
14	198 38.1	352 51.0	30.1	88 11.8	46.9	60 31.8	43.0	185 29.4	43.6	
15	213 40.6	7 52.0	31.0	103 12.6	46.7	75 33.7	42.9	200 32.1	43.6	
16	228 43.1	22 53.0	31.9	118 13.4	46.5	90 35.7	42.8	215 34.7	43.5	
17	243 45.5	37 53.9	-15 32.8	133 14.2	+22 46.3	105 37.6	+16 42.6	230 37.3	+2 43.4	
18	258 48.0	52 54.9	-15 33.7	148 15.0	+22 46.1	120 39.6	+16 42.5	245 39.9	+2 43.4	
19	273 50.5	67 55.9	34.6	163 15.8	46.0	135 41.5	42.3	260 42.5	43.3	
20	288 52.9	82 56.9	35.5	178 16.5	45.8	150 43.5	42.2	275 45.1	43.2	
21	303 55.4	97 57.8	36.4	193 17.3	45.6	165 45.5	42.0	290 47.7	43.1	
22	318 57.9	112 58.8	37.3	208 18.1	45.4	180 47.4	41.9	305 50.4	43.1	
23	334 00.3	127 59.8	38.2	223 18.9	45.3	195 49.4	41.7	320 53.0	43.0	
24	349 02.8	143 00.8	-15 39.1	238 19.7	+22 45.1	210 51.3	+16 41.6	335 55.6	+2 42.9	
Dif	—	+10	-9	+8	-2	+20	-1	+26	-1	

UT	SOL		LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG:11 ^h 57.0 ^m		Edad: 28.3 ^d PHE { 4 ^h : 58' ⁸ 12 ^h : 58' ⁶ 20 ^h : 58' ⁴ R ^o : 46 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	42.6	+5	00.5	194	35.7	+10	19.2	60 N	3	39	4	33	5	16
1	195	42.8	+4	59.6	209	06.2	+10	03.6	58	48	39	19	11	93	11
2	210	43.1		58.6	223	36.8	+9	48.0	56	3	57	43	22	15	90
3	225	43.3		57.7	238	07.4		32.3	54	4	04	48	24	20	86
4	240	43.5		56.8	252	38.1		16.6	52	10	52	26	23	84	04
5	255	43.7	+4	55.8	267	08.8	+9	00.9	50	4	16	4	55	5	28
6	270	43.9	+4	54.9	281	39.7	+8	45.1	45	4	27	5	03	4	34
7	285	44.1		53.9	296	10.6		29.3	40	36	09	36	41	70	54
8	300	44.4		53.0	310	41.5	+8	13.5	35	44	14	39	46	67	51
9	315	44.6		52.0	325	12.6	+7	57.6	30	49	18	42	51	63	48
10	330	44.8		51.1	339	43.7		41.8	20	4	58	24	46	4	59
11	345	45.0	+4	50.1	354	14.8	+7	25.9	10 N	5	05	5	29	5	50
12	0	45.2	+4	49.2	8	46.0	+7	09.9	0	5	09	5	33	5	54
13	15	45.4		48.2	23	17.3	+6	54.0	10 S	12	36	5	57	19	42
14	30	45.7		47.3	37	48.6		38.0	20	13	39	6	01	26	37
15	45	45.9		46.3	52	20.0		22.0	30	13	41	05	34	31	21
16	60	46.1		45.4	66	51.5	+6	06.0	35	12	42	07	38	28	18
17	75	46.3	+4	44.4	81	23.0	+5	49.9	40	5	11	5	42	6	09
18	90	46.5	+4	43.5	95	54.5	+5	33.9	45	5	09	5	43	6	12
19	105	46.8		42.5	110	26.1		17.8	50	06	43	15	5	57	
20	120	47.0		41.6	124	57.8	+5	01.7	52	04	43	17	6	00	
21	135	47.2		40.6	139	29.5	+4	45.6	54	02	43	19	03	10	
22	150	47.4		39.7	154	01.2		29.5	56	5	00	43	20	07	
23	165	47.6		38.7	168	33.0	+4	13.4	58	4	58	43	22	12	
24	180	47.9	+4	37.8	183	04.9	+3	57.3	60 S	4	55	5	43	6	25

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 43.7 ^m		Mag: -4.7 PMG: 14 ^h 27 ^m		Mag: +1.2 PMG: 8 ^h 06 ^m		Mag: -1.8 PMG: 9 ^h 55 ^m		Mag: +0.4 PMG: 1 ^h 36 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	349	02.8	143	00.8	-15	39.1	238	19.7	+22	45.1
1	4	05.2	158	01.8		40.0	253	20.5		44.9
2	19	07.7	173	02.8		40.9	268	21.3		44.7
3	34	10.2	188	03.8		41.8	283	22.1		44.5
4	49	12.6	203	04.8		42.7	298	22.9		44.4
5	64	15.1	218	05.7	-15	43.6	313	23.7	+22	44.2
6	79	17.6	233	06.7	-15	44.5	328	24.5	+22	44.0
7	94	20.0	248	07.7		45.4	343	25.3		43.8
8	109	22.5	263	08.7		46.3	358	26.1		43.6
9	124	25.0	278	09.7		47.2	13	26.9		43.4
10	139	27.4	293	10.7		48.1	28	27.7		43.3
11	154	29.9	308	11.7	-15	49.0	43	28.5	+22	43.1
12	169	32.4	323	12.8	-15	49.8	58	29.2	+22	42.9
13	184	34.8	338	13.8		50.7	73	30.0		42.7
14	199	37.3	353	14.8		51.6	88	30.8		42.5
15	214	39.7	8	15.8		52.5	103	31.6		42.3
16	229	42.2	23	16.8		53.4	118	32.4		42.2
17	244	44.7	38	17.8	-15	54.3	133	33.2	+22	42.0
18	259	47.1	53	18.8	-15	55.2	148	34.0	+22	41.8
19	274	49.6	68	19.8		56.0	163	34.8		41.6
20	289	52.1	83	20.9		56.9	178	35.6		41.4
21	304	54.5	98	21.9		57.8	193	36.4		41.2
22	319	57.0	113	22.9		58.7	208	37.2		41.1
23	334	59.5	128	23.9	-15	59.6	223	38.0		40.9
24	350	01.9	143	24.9	-16	00.5	238	38.8	+22	40.7
Dif	—		+10		-9		+8		-2	
								+20		-1
									+26	-
										-

UT	SOL			● LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 56.6 ^m			Edad: 29.3 ^d SD: 15'9 PMG: 12 ^h 10 ^m PHE { 4 ^h : 58'2 12 ^h : 58'0 20 ^h : 57'8 R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Civil			Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	180	47.9	+4	37.8	183	04.9	+3	57.3	60 N	18 33	19 16	20 09	5 43 95	18 14	1			
1	195	48.1		36.8	197	36.8		41.2	58	31	11	20 00	44 92	14	5			
2	210	48.3		35.9	212	08.7		25.1	56	28	06	19 52	45 88	15	8			
3	225	48.5		34.9	226	40.7	+3	08.9	54	26	19 02	46	46 85	15	11			
4	240	48.7		34.0	241	12.7	+2	52.8	52	24	18 59	40	47 83	16	13			
5	255	48.9	+4	33.0	255	44.8	+2	36.7	50	18 23	18 55	19 34	5 48 80	18 16	15			
6	270	49.2	+4	32.1	270	16.9	+2	20.6	45	18 19	18 48	19 23	5 50 74	18 17	20			
7	285	49.4		31.1	284	49.0	+2	04.4	40	16	43	15	51 70	18 24				
8	300	49.6		30.2	299	21.2	+1	48.3	35	13	38	08	53 66	18 28				
9	315	49.8		29.2	313	53.4		32.2	30	10	34	19 03	54 63	19 31				
10	330	50.0		28.3	328	25.6	+1	16.1	20	06	29	18 54	56 57	20 36				
11	345	50.3	+4	27.3	342	57.9	+1	00.0	10 N	18 03	18 24	18 49	5 58 51	18 20	42			
12	0	50.5	+4	26.4	357	30.2	+0	43.9	0	18 00	18 21	18 45	5 59 47	18 21	47			
13	15	50.7		25.4	12	02.6		27.9	10 S	17 57	18	42	6 01 42	22	51			
14	30	50.9		24.5	26	34.9	+0	11.8	20	54	16	41	03 37	23	56			
15	45	51.1		23.5	41	07.3	-0	04.2	30	50	14	42	05 31	23	62			
16	60	51.4		22.6	55	39.8		20.3	35	48	14	43	06 28	24	65			
17	75	51.6	+4	21.6	70	12.2	-0	36.3	40	17 46	18 13	18 45	6 08 24	18 24	70			
18	90	51.8	+4	20.7	84	44.7	-0	52.3	45	17 44	18 13	18 47	6 09 20	18 25	74			
19	105	52.0		19.7	99	17.2	-1	08.3	50	41	13	51	11 15	26	79			
20	120	52.2		18.7	113	49.8		24.2	52	40	13	52	12 13	26	82			
21	135	52.5		17.8	128	22.3		40.1	54	38	13	55	13 10	26	85			
22	150	52.7		16.8	142	54.9	-1	56.1	56	37	14	18 57	14 7	27	87			
23	165	52.9		15.9	157	27.5	-2	11.9	58	35	14	19 00	15 4	27	91			
24	180	53.1	+4	14.9	172	00.1	-2	27.8	60 S	17 33	18 14	19 03	6 16 1	18 28	94			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 0 ^h 39.8 ^m		Mag: -4.7 PMG: 14 ^h 25 ^m			Mag: +1.2 PMG: 8 ^h 05 ^m			Mag: -1.8 PMG: 9 ^h 52 ^m			Mag: +0.4 PMG: 1 ^h 32 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	350	01.9	143	24.9	-16	00.5	238	38.8	+22	40.7	211	38.3	+16	38.1	336	58.4	+2	41.2
1	5	04.4	158	26.0		01.3	253	39.6		40.5	226	40.3		38.0	352	01.0		41.2
2	20	06.8	173	27.0		02.2	268	40.4		40.3	241	42.2		37.8	7	03.6		41.1
3	35	09.3	188	28.0		03.1	283	41.2		40.1	256	44.2		37.7	22	06.2		41.0
4	50	11.8	203	29.1		04.0	298	42.0		39.9	271	46.1		37.5	37	08.8		41.0
5	65	14.2	218	30.1	-16	04.8	313	42.8	+22	39.8	286	48.1	+16	37.4	52	11.4	+2	40.9
6	80	16.7	233	31.1	-16	05.7	328	43.6	+22	39.6	301	50.1	+16	37.2	67	14.1	+2	40.8
7	95	19.2	248	32.2		06.6	343	44.4		39.4	316	52.0		37.1	82	16.7		40.7
8	110	21.6	263	33.2		07.5	358	45.2		39.2	331	54.0		36.9	97	19.3		40.7
9	125	24.1	278	34.3		08.3	13	46.0		39.0	346	55.9		36.8	112	21.9		40.6
10	140	26.6	293	35.3		09.2	28	46.8		38.8	1	57.9		36.7	127	24.5		40.5
11	155	29.0	308	36.3	-16	10.1	43	47.6	+22	38.6	16	59.9	+16	36.5	142	27.2	+2	40.5
12	170	31.5	323	37.4	-16	10.9	58	48.4	+22	38.4	32	01.8	+16	36.4	157	29.8	+2	40.4
13	185	34.0	338	38.4		11.8	73	49.2		38.3	47	03.8		36.2	172	32.4		40.3
14	200	36.4	353	39.5		12.7	88	50.0		38.1	62	05.7		36.1	187	35.0		40.2
15	215	38.9	8	40.5		13.5	103	50.8		37.9	77	07.7		35.9	202	37.6		40.2
16	230	41.3	23	41.6		14.4	118	51.6		37.7	92	09.7		35.8	217	40.2		40.1
17	245	43.8	38	42.7	-16	15.3	133	52.4	+22	37.5	107	11.6	+16	35.6	232	42.9	+2	40.0
18	260	46.3	53	43.7	-16	16.1	148	53.2	+22	37.3	122	13.6	+16	35.5	247	45.5	+2	40.0
19	275	48.7	68	44.8		17.0	163	54.0		37.1	137	15.5		35.3	262	48.1		39.9
20	290	51.2	83	45.8		17.9	178	54.8		36.9	152	17.5		35.2	277	50.7		39.8
21	305	53.7	98	46.9		18.7	193	55.7		36.7	167	19.5		35.1	292	53.3		39.7
22	320	56.1	113	48.0		19.6	208	56.5		36.5	182	21.4		34.9	307	56.0		39.7
23	335	58.6	128	49.0		20.5	223	57.3		36.3	197	23.4		34.8	322	58.6		39.6
24	351	01.1	143	50.1	-16	21.3	238	58.1	+22	36.2	212	25.3	+16	34.6	338	01.2	+2	39.5
Dif	—		+10		-9		+8		-2		+20		-1		+26		-	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 56.3 ^m				Edad: 0.9 ^d PHE { 4 ^h : 57/6 12 ^h : 57/3 20 ^h : 57/1 PMG: 12 ^h 56 ^m R°: 45 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°		Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	53.1	+4	14.9	172	00.1	-2	27.8	60 N	3	45	4	38	5	21	7	17	
1	195	53.3		14.0	186	32.7		43.6	58	3	54		43	23	14	89	18	
2	210	53.6		13.0	201	05.4	-2	59.4	56	4	01		48	26	12	85	21	
3	225	53.8		12.1	215	38.0	-3	15.2	54		08		52	28	10	82	24	
4	240	54.0		11.1	230	10.7		30.9	52		14		55	30	08	80	27	
5	255	54.2	+4	10.2	244	43.4	-3	46.7	50	4	19	4	58	5	31	7	06	
6	270	54.4	+4	09.2	259	16.1	-4	02.3	45	4	30	5	05	5	35	7	03	
7	285	54.7		08.3	273	48.8		18.0	40		38		11	38	7	00	67	
8	300	54.9		07.3	288	21.6		33.6	35		45		15	41	6	57	64	
9	315	55.1		06.4	302	54.3	-4	49.2	30		51		19	43	55	60	49	
10	330	55.3		05.4	317	27.0	-5	04.7	20	4	59	25	25	47	51	55	18	
11	345	55.5	+4	04.4	331	59.8	-5	20.2	10 N	5	04	5	29	5	50	6	48	
12	0	55.8	+4	03.5	346	32.5	-5	35.6	0	5	08	5	32	5	53	6	45	
13	15	56.0		02.5	1	05.3	-5	51.0	10 S		11		35	56	42	40	12	
14	30	56.2		01.6	15	38.1	-6	06.4	20		11		37	5	59	39	35	
15	45	56.4	+4	00.6	30	10.8		21.7	30		11		38	6	02	35	30	
16	60	56.6	+3	59.7	44	43.6		37.0	35		09		39	04	33	27	28	
17	75	56.9	+3	58.7	59	16.4	-6	52.3	40	5	08	5	39	6	06	6	31	
18	90	57.1	+3	57.8	73	49.2	-7	07.4	45	5	05	5	39	6	08	6	28	
19	105	57.3		56.8	88	21.9		22.6	50		01		39	11	25	14	43	
20	120	57.5		55.8	102	54.7		37.7	52	5	00	39	12	23	12	46	80	
21	135	57.7		54.9	117	27.5	-7	52.7	54	4	57	38	14	22	9	49	83	
22	150	58.0		53.9	132	00.2	-8	07.7	56		55		38	15	20	6	53	
23	165	58.2		53.0	146	33.0		22.7	58		52		38	17	18	3	19	
24	180	58.4	+3	52.0	161	05.7	-8	37.5	60 S	4	49	5	37	6	19	6	16	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 35.8 ^m		Mag: -4.7 PMG: 14 ^h 24 ^m			Mag: +1.2 PMG: 8 ^h 04 ^m			Mag: -1.8 PMG: 9 ^h 49 ^m			Mag: +0.4 PMG: 1 ^h 28 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	351	01.1	143	50.1	-16	21.3	238	58.1	+22	36.2	212	25.3	+16	34.6	338	01.2	+2	
1	6	03.5	158	51.2		22.2	253	58.9		36.0	227	27.3		34.5	353	03.8		
2	21	06.0	173	52.2		23.0	268	59.7		35.8	242	29.3		34.3	8	06.4		
3	36	08.4	188	53.3		23.9	284	00.5		35.6	257	31.2		34.2	23	09.0		
4	51	10.9	203	54.4		24.7	299	01.3		35.4	272	33.2		34.0	38	11.7		
5	66	13.4	218	55.5	-16	25.6	314	02.1	+22	35.2	287	35.2	+16	33.9	53	14.3	+2	
6	81	15.8	233	56.5	-16	26.5	329	02.9	+22	35.0	302	37.1	+16	33.8	68	16.9	+2	
7	96	18.3	248	57.6		27.3	344	03.7		34.8	317	39.1		33.6	83	19.5		
8	111	20.8	263	58.7		28.2	359	04.5		34.6	332	41.0		33.5	98	22.1		
9	126	23.2	278	59.8		29.0	14	05.3		34.4	347	43.0		33.3	113	24.8		
10	141	25.7	294	00.9		29.9	29	06.1		34.2	2	45.0		33.2	128	27.4		
11	156	28.2	309	02.0	-16	30.7	44	06.9	+22	34.0	17	46.9	+16	33.0	143	30.0	+2	
12	171	30.6	324	03.0	-16	31.6	59	07.7	+22	33.8	32	48.9	+16	32.9	158	32.6	+2	
13	186	33.1	339	04.1		32.4	74	08.6		33.6	47	50.9		32.7	173	35.2		
14	201	35.6	354	05.2		33.3	89	09.4		33.5	62	52.8		32.6	188	37.9		
15	216	38.0	9	06.3		34.1	104	10.2		33.3	77	54.8		32.5	203	40.5		
16	231	40.5	24	07.4		35.0	119	11.0		33.1	92	56.7		32.3	218	43.1		
17	246	42.9	39	08.5	-16	35.8	134	11.8	+22	32.9	107	58.7	+16	32.2	233	45.7	+2	
18	261	45.4	54	09.6	-16	36.6	149	12.6	+22	32.7	123	00.7	+16	32.0	248	48.3	+2	
19	276	47.9	69	10.7		37.5	164	13.4		32.5	138	02.6		31.9	263	51.0		
20	291	50.3	84	11.8		38.3	179	14.2		32.3	153	04.6		31.7	278	53.6		
21	306	52.8	99	12.9		39.2	194	15.0		32.1	168	06.6		31.6	293	56.2		
22	321	55.3	114	14.0		40.0	209	15.8		31.9	183	08.5		31.4	308	58.8		
23	336	57.7	129	15.1		40.8	224	16.7		31.7	198	10.5		31.3	324	01.4		
24	352	00.2	144	16.3	-16	41.7	239	17.5	+22	31.5	213	12.5	+16	31.1	339	04.1	+2	
Dif	—		+11			-8	+8			-2	+20		-1			+26		-1

UT	SOL			● LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/9 PMG: 11 ^h 55.9 ^m			Edad: 1.9 ^d PHE { 4 ^h : 56/9 12 ^h : 56/6 20 ^h : 56/4 R°: 47 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /	° /		° /		°	h m	h m	h m	h m m		h m m			
0	180 58.4	+3 52.0	161 05.7	138	-8 37.5	149		60 N	18 27	19 10	20 02	8 50 95		18 14 2			
1	195 58.6		175 38.5	137	-8 52.4	147		58	25	05	19 54	43 91		21 7			
2	210 58.8	50.1	190 11.2	137	-9 07.1	147		56	23	19 01	47	37 87		28 10			
3	225 59.1	49.2	204 43.9	137	21.9	148		54	21	18 57	40	32 84		34 13			
4	240 59.3	48.2	219 16.7	138	36.5	146		52	20	54	35	28 80		40 16			
5	255 59.5	+3 47.2	233 49.4	137	-9 51.1	146		50	18 18	18 51	19 30	8 24 77		18 45 18			
6	270 59.7	+3 46.3	248 22.1	137	-10 05.7	146		45	18 15	18 44	19 19	8 15 72		18 55 24			
7	286 00.0	45.3	262 54.8	137	20.2	145		40	12	39	11	07 68		19 05 27			
8	301 00.2	44.4	277 27.4	136	34.6	144		35	10	35	05	8 01 64		12 31			
9	316 00.4	43.4	292 00.1	137	-10 48.9	143		30	08	32	19 00	7 55 62		19 34			
10	331 00.6	42.5	306 32.7	136	-11 03.2	143		20	05	27	18 52	46 56		31 39			
11	346 00.8	+3 41.5	321 05.4	137	-11 17.5	143		10 N	18 02	18 23	18 47	7 37 52		19 42 43			
12	1 01.1	+3 40.5	335 38.0	136	-11 31.6	141		0	17 59	18 20	18 44	7 30 47		19 51 48			
13	16 01.3	39.6	350 10.6	136	45.7	141		10 S	57	18	42	22 43		20 01 52			
14	31 01.5	38.6	4 43.1	135	-11 59.8	141		20	54	16	42	14 38		12 56			
15	46 01.7	37.7	19 15.7	136	-12 13.7	139		30	51	15	43	05 33		24 61			
16	61 01.9	36.7	33 48.2	135	27.6	139		35	50	15	44	7 00 29		31 64			
17	76 02.2	+3 35.7	48 20.7	135	-12 41.4	138		40	17 48	18 15	18 47	6 54 26		20 39 68			
18	91 02.4	+3 34.8	62 53.2	135	-12 55.2	138		45	17 46	18 15	18 50	6 47 22		20 49 72			
19	106 02.6	33.8	77 25.7	135	-13 08.9	137		50	44	16	54	39 17		21 00 78			
20	121 02.8	32.9	91 58.2	135	22.5	136		52	43	17	56	35 15		06 80			
21	136 03.1	31.9	106 30.6	134	36.0	135		54	42	17	18 58	31 12		12 83			
22	151 03.3	31.0	121 03.0	134	-13 49.5	135		56	41	18	19 01	26 9		18 87			
23	166 03.5	30.0	135 35.4	134	-14 02.9	134		58	39	18	04	21 6		26 90			
24	181 03.7	+3 29.0	150 07.7	133	-14 16.2	133		60 S	17 38	18 19	19 08	6 16 2		21 34 96			
UT	ARIES PMG 0 ^h 31.9 ^m		VENUS Mag: -4.7 PMG: 14 ^h 22 ^m		MARTE Mag: +1.2 PMG: 8 ^h 02 ^m		JÚPITER Mag: -1.8 PMG: 9 ^h 46 ^m		SATURNO Mag: +0.4 PMG: 1 ^h 23 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /							
0	352 00.2	144 16.3	-16 41.7	239 17.5	+22 31.5	213 12.5	+16 31.1	339 04.1	+2 37.8								
1	7 02.7	159 17.4	42.5	254 18.3	31.3	228 14.4	31.0	354 06.7	37.7								
2	22 05.1	174 18.5	43.4	269 19.1	31.1	243 16.4	30.9	9 09.3	37.7								
3	37 07.6	189 19.6	44.2	284 19.9	30.9	258 18.3	30.7	24 11.9	37.6								
4	52 10.0	204 20.7	45.0	299 20.7	30.7	273 20.3	30.6	39 14.6	37.5								
5	67 12.5	219 21.8	-16 45.9	314 21.5	+22 30.5	288 22.3	+16 30.4	54 17.2	+2 37.4								
6	82 15.0	234 23.0	-16 46.7	329 22.3	+22 30.3	303 24.2	+16 30.3	69 19.8	+2 37.4								
7	97 17.4	249 24.1	47.5	344 23.2	30.1	318 26.2	30.1	84 22.4	37.3								
8	112 19.9	264 25.2	48.4	359 24.0	29.9	333 28.2	30.0	99 25.0	37.2								
9	127 22.4	279 26.4	49.2	14 24.8	29.7	348 30.1	29.8	114 27.7	37.1								
10	142 24.8	294 27.5	50.0	29 25.6	29.5	3 32.1	29.7	129 30.3	37.1								
11	157 27.3	309 28.6	-16 50.9	44 26.4	+22 29.3	18 34.1	+16 29.6	144 32.9	+2 37.0								
12	172 29.8	324 29.7	-16 51.7	59 27.2	+22 29.1	33 36.0	+16 29.4	159 35.5	+2 36.9								
13	187 32.2	339 30.9	52.5	74 28.0	28.9	48 38.0	29.3	174 38.1	36.9								
14	202 34.7	354 32.0	53.3	89 28.9	28.7	63 40.0	29.1	189 40.8	36.8								
15	217 37.2	9 33.2	54.2	104 29.7	28.5	78 41.9	29.0	204 43.4	36.7								
16	232 39.6	24 34.3	55.0	119 30.5	28.3	93 43.9	28.8	219 46.0	36.6								
17	247 42.1	39 35.5	-16 55.8	134 31.3	+22 28.1	108 45.9	+16 28.7	234 48.6	+2 36.6								
18	262 44.5	54 36.6	-16 56.6	149 32.1	+22 27.9	123 47.8	+16 28.5	249 51.3	+2 36.5								
19	277 47.0	69 37.7	57.5	164 32.9	27.7	138 49.8	28.4	264 53.9	36.4								
20	292 49.5	84 38.9	58.3	179 33.7	27.5	153 51.8	28.3	279 56.5	36.3								
21	307 51.9	99 40.0	59.1	194 34.6	27.3	168 53.7	28.1	294 59.1	36.3								
22	322 54.4	114 41.2	-16 59.9	209 35.4	27.1	183 55.7	28.0	310 01.7	36.2								
23	337 56.9	129 42.4	-17 00.7	224 36.2	26.9	198 57.7	27.8	325 04.4	36.1								
24	352 59.3	144 43.5	-17 01.6	239 37.0	+22 26.7	213 59.6	+16 27.7	340 07.0	+2 36.1								
Dif	—	+11	-8	+8	-2	+20	-1	+26	-1								

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 55.6 ^m			Edad: 2.9 ^d PHE { 4 ^h : 56'2 12 ^h : 55'9 20 ^h : 55'7 PMG: 14 ^h 26 ^m R°: 48 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	h	m			
0	181	03.7	+3	29.0	150	07.7	-14	16.2	60 N	3	50	4	43	5	25	10	23	95	18	15	2
1	196	03.9			164	40.1		29.4	58	3	59		48	28	12	90		27	8		
2	211	04.2			179	12.4		42.5	56	4	06		52	29	10	03	85	37	12		
3	226	04.4			193	44.6	-14	55.6	54	12		55	31	9	54	82		46	16		
4	241	04.6			208	16.9	-15	08.6	52	18	4	59	33	47	78	18	54	19			
5	256	04.8	+3	24.2	222	49.1	-15	21.5	50	4	23	5	02	5	34	9	40	76	19	02	21
6	271	05.1	+3	23.3	237	21.3	-15	34.3	45	4	33	5	08	5	37	9	26	70	19	18	26
7	286	05.3			251	53.4		47.1	40	41		13	40	14	66		31	30			
8	301	05.5			266	25.5	-15	59.7	35	47		17	42	9	04	62		42	33		
9	316	05.7			280	57.6	-16	12.3	30	52		20	44	8	55	60	19	52	36		
10	331	05.9			295	29.7		24.8	20	4	59	25	47	40	55	20	09	40			
11	346	06.2	+3	18.5	310	01.7	-16	37.2	10 N	5	04	5	29	5	50	8	27	51	20	24	44
12	1	06.4	+3	17.5	324	33.7	-16	49.5	0	5	08	5	32	5	52	8	15	47	20	37	48
13	16	06.6			339	05.7	-17	01.8	10 S	09		34	55	8	03	43	20	52	51		
14	31	06.8			353	37.6		13.9	20	10		35	5	57	7	51	38	21	07	55	
15	46	07.0			8	09.5		25.9	30	08		36	6	00	36	34		24	59		
16	61	07.3			22	41.3		37.9	35	07		36	01	28	31	34		62			
17	76	07.5	+3	12.7	37	13.2	-17	49.8	40	5	04	5	36	6	03	7	19	27	21	46	65
18	91	07.7	+3	11.8	51	44.9	-18	01.5	45	5	01	5	35	6	05	7	08	23	21	59	70
19	106	07.9			66	16.7		13.2	50	4	57	35	07	6	54	19	22	16	75		
20	121	08.2			80	48.4		24.8	52	55		34	08	48	17	24		78			
21	136	08.4			95	20.1		36.3	54	52		34	09	42	13	33		80			
22	151	08.6			109	51.7		47.7	56	50		33	10	34	10	43		84			
23	166	08.8			124	23.3	-18	59.0	58	46		32	11	26	6	22	55	88			
24	181	09.0	+3	06.0	138	54.9	-19	10.2	60 S	4	43	5	31	6	12	6	16	2	23	08	95
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 0 ^h 28.0 ^m			Mag: -4.8 PMG: 14 ^h 20 ^m			Mag: +1.2 PMG: 8 ^h 01 ^m			Mag: -1.8 PMG: 9 ^h 43 ^m			Mag: +0.4 PMG: 1 ^h 19 ^m								
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	352	59.3	144	43.5	-17	01.6	239	37.0	+22	26.7	213	59.6	+16	27.7	340	07.0	+2	36.1			
1	8	01.8	159	44.7		02.4	254	37.8		26.5	229	01.6		27.5	355	09.6		36.0			
2	23	04.3	174	45.8		03.2	269	38.7		26.3	244	03.6		27.4	10	12.2		35.9			
3	38	06.7	189	47.0		04.0	284	39.5		26.1	259	05.5		27.2	25	14.9		35.8			
4	53	09.2	204	48.2		04.8	299	40.3		25.9	274	07.5		27.1	40	17.5		35.8			
5	68	11.7	219	49.3	-17	05.6	314	41.1	+22	25.7	289	09.5	+16	27.0	55	20.1	+2	35.7			
6	83	14.1	234	50.5	-17	06.4	329	41.9	+22	25.5	304	11.4	+16	26.8	70	22.7	+2	35.6			
7	98	16.6	249	51.7		07.3	344	42.7		25.3	319	13.4		26.7	85	25.4		35.5			
8	113	19.0	264	52.9		08.1	359	43.6		25.1	334	15.4		26.5	100	28.0		35.5			
9	128	21.5	279	54.0		08.9	14	44.4		24.8	349	17.3		26.4	115	30.6		35.4			
10	143	24.0	294	55.2		09.7	29	45.2		24.6	4	19.3		26.2	130	33.2		35.3			
11	158	26.4	309	56.4	-17	10.5	44	46.0	+22	24.4	19	21.3	+16	26.1	145	35.9	+2	35.3			
12	173	28.9	324	57.6	-17	11.3	59	46.9	+22	24.2	34	23.2	+16	26.0	160	38.5	+2	35.2			
13	188	31.4	339	58.8		12.1	74	47.7		24.0	49	25.2		25.8	175	41.1		35.1			
14	203	33.8	354	59.9		12.9	89	48.5		23.8	64	27.2		25.7	190	43.7		35.0			
15	218	36.3	10	01.1		13.7	104	49.3		23.6	79	29.1		25.5	205	46.3		35.0			
16	233	38.8	25	02.3		14.5	119	50.1		23.4	94	31.1		25.4	220	49.0		34.9			
17	248	41.2	40	03.5	-17	15.3	134	51.0	+22	23.2	109	33.1	+16	25.2	235	51.6	+2	34.8			
18	263	43.7	55	04.7	-17	16.1	149	51.8	+22	23.0	124	35.0	+16	25.1	250	54.2	+2	34.7			
19	278	46.1	70	05.9		16.9	164	52.6		22.8	139	37.0		24.9	265	56.8		34.7			
20	293	48.6	85	07.1		17.7	179	53.4		22.6	154	39.0		24.8	280	59.5		34.6			
21	308	51.1	100	08.3		18.5	194	54.3		22.4	169	40.9		24.7	296	02.1		34.5			
22	323	53.5	115	09.5		19.3	209	55.1		22.2	184	42.9		24.5	311	04.7		34.4			
23	338	56.0	130	10.7		20.1	224	55.9		22.0	199	44.9		24.4	326	07.3		34.4			
24	353	58.5	145	11.9	-17	20.9	239	56.7	+22	21.7	214	46.9	+16	24.2	341	10.0	+2	34.3			
Dif	—			+12	-8		+8	-2		+20	-1		+26	-1							

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna					
	SD: 15/9 PMG: 11 ^h 55.2 ^m			Edad: 3.9 ^d SD: 15/2 PMG: 15 ^h 14 ^m PHE 4^h: 55/5 12^h: 55/3 20^h: 55/2 R°: 50^m																		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Civil	Náutico	Hora	R°	Hora	R°						
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	h m	h m	h m	h m						
0	181 09.0	+3 06.0	138 54.9	125	-19 10.2	111		60 N	18 21	19 03	19 55	11 58	97	18 17	8							
1	196 09.3	05.0	153 26.4	125	21.3	110		58	19	18 59	47	42	89	35	14							
2	211 09.5	04.1	167 57.9	124	32.3	110		56	18	55	41	28	84	18	49	20						
3	226 09.7	03.1	182 29.3	124	43.3	110		54	16	52	35	16	80	19	02	23						
4	241 09.9	02.1	197 00.7	124	-19 54.1	108		52	15	49	30	11	05	77	13	26						
5	256 10.2	+3 01.2	211 32.1	124	-20 04.8	107		50	18 14	18 46	19 25	10 56	74	19 23	28							
6	271 10.4	+3 00.2	226 03.4	123	-20 15.4	106		45	18 11	18 41	19 15	10 36	69	19 44	33							
7	286 10.6	+2 59.3	240 34.7	122	25.9	104		40	09	36	08	20	66	20	01	36						
8	301 10.8	58.3	255 05.9	122	36.3	103		35	07	32	19 02	10 06	64	15	39							
9	316 11.1	57.3	269 37.1	122	46.6	102		30	05	29	18 57	9 55	60	28	41							
10	331 11.3	56.4	284 08.3	122	-20 56.8	101		20	03	25	50	35	57	20	49	45						
11	346 11.5	+2 55.4	298 39.4	121	-21 06.9	100		10 N	18 01	18 22	18 46	9 18	53	21	08	48						
12	1 11.7	+2 54.4	313 10.5	121	-21 16.9	99		0	17 58	18 19	18 43	9 02	50	21	25	51						
13	16 11.9	53.5	327 41.5	120	26.8	97		0 S	57	18	42	8 46	47	21	43	53						
14	31 12.2	52.5	342 12.5	120	36.5	97		20	55	17	42	29	44	22	02	56						
15	46 12.4	51.6	356 43.4	119	46.2	96		30	52	16	44	8 10	39	23	60							
16	61 12.6	50.6	11 14.3	119	-21 55.8	94		35	51	17	46	7 59	37	36	62							
17	76 12.8	+2 49.6	25 45.2	119	-22 05.2	93		40	17 50	18 17	18 48	7 46	34	22	51	65						
18	91 13.1	+2 48.7	40 16.0	118	-22 14.5	93		45	17 49	18 18	18 52	7 31	31	23	09	68						
19	106 13.3	47.7	54 46.8	118	23.8	91		50	47	19	57	13	26	31	72							
20	121 13.5	46.7	69 17.5	117	32.9	90		52	46	20	18 59	7 05	22	42	74							
21	136 13.7	45.8	83 48.2	117	41.9	89		54	45	21	19 02	6 55	20	23	53	78						
22	151 13.9	44.8	98 18.9	117	50.8	88		56	44	21	05	44	17	**	**	**						
23	166 14.2	43.9	112 49.5	116	-22 59.6	86		58	43	22	08	32	12	**	**	**						
24	181 14.4	+2 42.9	127 20.1	116	-23 08.2			60 S	17 42	18 24	19 13	6 18	6	**	**	**						

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 0 ^h 24.0 ^m		Mag: -4.8 PMG: 14 ^h 18 ^m			Mag: +1.2 PMG: 8 ^h 00 ^m			Mag: -1.8 PMG: 9 ^h 40 ^m			Mag: +0.4 PMG: 1 ^h 15 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /			
0	353 58.5	145 11.9	-17 20.9	239 56.7	+22 21.7	214 46.9	+16 24.2	341 10.0	+2 34.3								
1	9 00.9	160 13.1	21.7	254 57.5	21.5	229 48.8	24.1	356 12.6	34.2								
2	24 03.4	175 14.3	22.5	269 58.4	21.3	244 50.8	23.9	11 15.2	34.1								
3	39 05.9	190 15.5	23.3	284 59.2	21.1	259 52.8	23.8	26 17.8	34.1								
4	54 08.3	205 16.8	24.1	300 00.0	20.9	274 54.7	23.6	41 20.5	34.0								
5	69 10.8	220 18.0	-17 24.9	315 00.8	+22 20.7	289 56.7	+16 23.5	56 23.1	+2 33.9								
6	84 13.3	235 19.2	-17 25.7	330 01.7	+22 20.5	304 58.7	+16 23.4	71 25.7	+2 33.9								
7	99 15.7	250 20.4	26.5	345 02.5	20.3	320 00.6	23.2	86 28.3	33.8								
8	114 18.2	265 21.6	27.2	0 03.3	20.1	335 02.6	23.1	101 31.0	33.7								
9	129 20.6	280 22.9	28.0	15 04.2	19.9	350 04.6	22.9	116 33.6	33.6								
10	144 23.1	295 24.1	28.8	30 05.0	19.6	5 06.6	22.8	131 36.2	33.6								
11	159 25.6	310 25.3	-17 29.6	45 05.8	+22 19.4	20 08.5	+16 22.6	146 38.8	+2 33.5								
12	174 28.0	325 26.6	-17 30.4	60 06.6	+22 19.2	35 10.5	+16 22.5	161 41.5	+2 33.4								
13	189 30.5	340 27.8	31.2	75 07.5	19.0	50 12.5	22.4	176 44.1	33.3								
14	204 33.0	355 29.0	31.9	90 08.3	18.8	65 14.4	22.2	191 46.7	33.3								
15	219 35.4	10 30.3	32.7	105 09.1	18.6	80 16.4	22.1	206 49.4	33.2								
16	234 37.9	25 31.5	33.5	120 09.9	18.4	95 18.4	21.9	221 52.0	33.1								
17	249 40.4	40 32.7	-17 34.3	135 10.8	+22 18.2	110 20.4	+16 21.8	236 54.6	+2 33.0								
18	264 42.8	55 34.0	-17 35.1	150 11.6	+22 18.0	125 22.3	+16 21.6	251 57.2	+2 33.0								
19	279 45.3	70 35.2	35.8	165 12.4	17.7	140 24.3	21.5	266 59.9	32.9								
20	294 47.7	85 36.5	36.6	180 13.3	17.5	155 26.3	21.3	282 02.5	32.8								
21	309 50.2	100 37.7	37.4	195 14.1	17.3	170 28.2	21.2	297 05.1	32.7								
22	324 52.7	115 39.0	38.2	210 14.9	17.1	185 30.2	21.1	312 07.7	32.7								
23	339 55.1	130 40.2	38.9	225 15.8	16.9	200 32.2	20.9	327 10.4	32.6								
24	354 57.6	145 41.5	-17 39.7	240 16.6	+22 16.7	215 34.2	+16 20.8	342 13.0	+2 32.5								
Dif	—		+12	-8		+8		-2		+20		-1		+26		-	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 54.9 ^m			Edad: 4.9 ^d PHE { 4 ^h : 55'0 12 ^h : 54'8 20 ^h : 54'7 R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	h	m
0	181	14.4	+2	42.9	127	20.1	115	-23	08.2	86	60 N	3 56	4 48	5 30	13 33	90	18 24	15
1	196	14.6		41.9	141	50.6	115		16.8	84	58	4 04	52	32	13 09	81	18 48	24
2	211	14.8		41.0	156	21.1	115		25.2	83	56	10	56	33	12 50	76	19 07	29
3	226	15.1		40.0	170	51.6	115		33.5	83	54	16	4 59	35	34	73	24	31
4	241	15.3		39.0	185	22.0	114		41.7	82	52	21	5 02	36	21	70	38	34
5	256	15.5	+2	38.1	199	52.3	113	-23	49.8	81	50	4 26	5 05	5 37	12 09	68	19 50	36
6	271	15.7	+2	37.1	214	22.7	114	-23	57.8	80	45	4 35	5 10	5 40	11 44	64	20 16	39
7	286	16.0		36.1	228	52.9	112	-24	05.7	79	40	43	15	42	24	62	36	42
8	301	16.2		35.2	243	23.2	113		13.4	77	35	48	18	44	11 08	59	20 53	43
9	316	16.4		34.2	257	53.4	112		21.0	76	30	4 53	21	45	10 54	58	21 08	45
10	331	16.6		33.3	272	23.6	112		28.5	75	20	5 00	26	48	30	55	33	47
11	346	16.8	+2	32.3	286	53.7	111	-24	35.9	74	10 N	5 04	5 29	5 50	10 10	52	21 54	49
12	1	17.1	+2	31.3	301	23.8	111	-24	43.1	72	0	5 07	5 31	5 52	9 51	50	22 15	50
13	16	17.3		30.4	315	53.8	110		50.3	70	10 S	08	32	53	32	47	35	52
14	31	17.5		29.4	330	23.8	110	-24	57.3	72	20	08	33	55	9 11	46	22 57	54
15	46	17.7		28.4	344	53.8	110	-25	04.2	69	30	06	33	57	8 48	43	23 22	56
16	61	18.0		27.5	359	23.7	109		10.9	67	35	04	33	58	34	41	37	58
17	76	18.2	+2	26.5	13	53.6	109	-25	17.6	67	40	5 01	5 32	5 59	8 19	38	23 54	59
18	91	18.4	+2	25.5	28	23.5	109	-25	24.1	65	45	4 57	5 32	6 01	8 00	36	** ** *	**
19	106	18.6		24.6	42	53.3	108		30.5	64	50	53	30	02	7 37	32	** ** *	**
20	121	18.9		23.6	57	23.1	108		36.7	62	52	50	29	03	26	29	** ** *	**
21	136	19.1		22.6	71	52.8	107		42.9	62	54	47	29	04	7 14	26	** ** *	**
22	151	19.3		21.7	86	22.5	107		48.9	60	56	44	28	05	6 59	23	0 07	80
23	166	19.5		20.7	100	52.2	107	-25	54.8	59	58	41	26	05	43	18	23	85
24	181	19.7	+2	19.7	115	21.9	107	-26	00.6	58	60 S	4 36	5 25	6 06	6 23	10	0 43	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 0 ^h 20.1 ^m		Mag: -4.8 PMG: 14 ^h 16 ^m		Mag: +1.2 PMG: 7 ^h 58 ^m		Mag: -1.8 PMG: 9 ^h 36 ^m		Mag: +0.4 PMG: 1 ^h 11 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	354	57.6	145	41.5	-17	39.7	240	16.6	+22	16.7	215	34.2	+16	20.8	342	13.0	+2	32.5
1	10	00.1	160	42.8		40.5	255	17.4		16.5	230	36.1		20.6	357	15.6		32.5
2	25	02.5	175	44.0		41.3	270	18.3		16.2	245	38.1		20.5	12	18.2		32.4
3	40	05.0	190	45.3		42.0	285	19.1		16.0	260	40.1		20.3	27	20.9		32.3
4	55	07.5	205	46.6		42.8	300	19.9		15.8	275	42.0		20.2	42	23.5		32.2
5	70	09.9	220	47.8	-17	43.6	315	20.7	+22	15.6	290	44.0	+16	20.1	57	26.1	+2	32.2
6	85	12.4	235	49.1	-17	44.3	330	21.6	+22	15.4	305	46.0	+16	19.9	72	28.8	+2	32.1
7	100	14.9	250	50.4		45.1	345	22.4		15.2	320	48.0		19.8	87	31.4		32.0
8	115	17.3	265	51.6		45.9	0	23.2		15.0	335	49.9		19.6	102	34.0		31.9
9	130	19.8	280	52.9		46.6	15	24.1		14.7	350	51.9		19.5	117	36.6		31.9
10	145	22.2	295	54.2		47.4	30	24.9		14.5	5	53.9		19.3	132	39.3		31.8
11	160	24.7	310	55.5	-17	48.1	45	25.7	+22	14.3	20	55.9	+16	19.2	147	41.9	+2	31.7
12	175	27.2	325	56.8	-17	48.9	60	26.6	+22	14.1	35	57.8	+16	19.1	162	44.5	+2	31.6
13	190	29.6	340	58.0		49.7	75	27.4		13.9	50	59.8		18.9	177	47.1		31.6
14	205	32.1	355	59.3		50.4	90	28.2		13.7	66	01.8		18.8	192	49.8		31.5
15	220	34.6	11	00.6		51.2	105	29.1		13.4	81	03.8		18.6	207	52.4		31.4
16	235	37.0	26	01.9		51.9	120	29.9		13.2	96	05.7		18.5	222	55.0		31.3
17	250	39.5	41	03.2	-17	52.7	135	30.8	+22	13.0	111	07.7	+16	18.3	237	57.7	+2	31.3
18	265	42.0	56	04.5	-17	53.4	150	31.6	+22	12.8	126	09.7	+16	18.2	253	00.3	+2	31.2
19	280	44.4	71	05.8		54.2	165	32.4		12.6	141	11.7		18.0	268	02.9		31.1
20	295	46.9	86	07.1		55.0	180	33.3		12.3	156	13.6		17.9	283	05.5		31.0
21	310	49.4	101	08.4		55.7	195	34.1		12.1	171	15.6		17.8	298	08.2		31.0
22	325	51.8	116	09.7		56.5	210	34.9		11.9	186	17.6		17.6	313	10.8		30.9
23	340	54.3	131	11.0		57.2	225	35.8		11.7	201	19.6		17.5	328	13.4		30.8
24	355	56.7	146	12.3	-17	58.0	240	36.6	+22	11.5	216	21.5	+16	17.3	343	16.1	+2	30.7
Dif	—		+13		-8		+8		-2		+20		-1		+26		-	

UT	SOL			☾ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 54.5 ^m			Edad: 5.9 ^d SD: 14'9 PMG: 16 ^h 53 ^m		PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 R°: 53 ^m		Dif	Dif			Civil		Náutico	Hora R°		Hora R°						
	hG ☉	Dec		hG ☾																			
h	°	'		°	'		°	'		°	'	h	m	h	m	h	m	m	h	m	m		
0	181	19.7	+2	19.7	115	21.9		-26	00.6	56	60 N	18	15	18	57	19	48	15	03	71	18	39	38
1	196	20.0		18.8	129	51.5	106		06.2	55	58	14		53	41	14	30	67	19	12	43		
2	211	20.2		17.8	144	21.1	106		11.7	54	56	12		50	35	14	06	64		36	45		
3	226	20.4		16.8	158	50.6	105		17.1	54	54	11		47	29	13	47	62	19	55	47		
4	241	20.6		15.9	173	20.1	105		22.4	53	52	10		44	24		31	61	20	12	47		
5	256	20.9	+2	14.9	187	49.6	105	-26	27.5	51	50	18	09	18	42	19	20	13	17	60	20	26	48
6	271	21.1	+2	13.9	202	19.1	105	-26	32.5	50	45	18	07	18	37	19	11	12	48	59	20	55	50
7	286	21.3		13.0	216	48.5	104		37.3	48	40	06		33	19	05		26	58		21	18	50
8	301	21.5		12.0	231	17.9	104		42.1	48	35	04		30	18	59		12	07	57		36	51
9	316	21.8		11.0	245	47.3	104		46.7	46	30	03		27		55		11	52	56	21	53	51
10	331	22.0		10.1	260	16.6	103		51.2	45	20	18	01	23		49		25	55		22	20	52
11	346	22.2	+2	09.1	274	45.9	103	-26	55.5	43	10 N	17	59	18	20	18	45	11	02	54	22	43	53
12	1	22.4	+2	08.1	289	15.2	103	-26	59.7	42	0	17	58	18	18	18	42	10	41	52	23	05	53
13	16	22.6		07.2	303	44.5	103	-27	03.8	40	10 S	56		17		42		10	19	52		27	54
14	31	22.9		06.2	318	13.7	102		07.8	38	20	55		17		43		9	57	50	23	51	54
15	46	23.1		05.2	332	42.9	102		11.6	36	30	54		17		45		31	48		**	**	**
16	61	23.3		04.3	347	12.1	102		15.3	37	35	53		18		47		9	15	48	**	**	**
17	76	23.5	+2	03.3	1	41.3	102	-27	18.8	35	40	17	52	18	19	18	50	8	57	47	**	**	**
18	91	23.8	+2	02.3	16	10.4	101	-27	22.2	34	45	17	51	18	20	18	54	8	36	45	0	15	63
19	106	24.0		01.4	30	39.6	102		25.5	33	50	50		22		19	00	8	09	42	42	65	
20	121	24.2	+2	00.4	45	08.7	101		28.7	32	52	49		23		02		7	55	42	0	55	67
21	136	24.4	+1	59.4	59	37.8	101		31.7	30	54	49		24		06		40	40		1	10	68
22	151	24.7		58.5	74	06.8	100		34.6	27	56	48		25		09		22	37		27	72	
23	166	24.9		57.5	88	35.9	101		37.3	26	58	48		27		13		7	01	33	1	48	76
24	181	25.1	+1	56.5	103	04.9	100	-27	39.9	26	60 S	17	47	18	28	19	18	6	33	26	2	16	82

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 0 ^h 16.2 ^m		Mag: -4.8 PMG: 14 ^h 14 ^m		Mag: +1.2 PMG: 7 ^h 57 ^m		Mag: -1.8 PMG: 9 ^h 33 ^m		Mag: +0.4 PMG: 1 ^h 07 ^m	
h	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	355	56.7	146	12.3	-17	58.0	240	36.6	+22	11.5
1	10	59.2	161	13.7		58.7	255	37.4		11.2
2	26	01.7	176	15.0	-17	59.4	270	38.3		11.0
3	41	04.1	191	16.3	-18	00.2	285	39.1		10.8
4	56	06.6	206	17.6		00.9	300	40.0		10.6
5	71	09.1	221	18.9	-18	01.7	315	40.8	+22	10.4
6	86	11.5	236	20.2	-18	02.4	330	41.6	+22	10.1
7	101	14.0	251	21.6		03.2	345	42.5		09.9
8	116	16.5	266	22.9		03.9	0	43.3		09.7
9	131	18.9	281	24.2		04.6	15	44.2		09.5
10	146	21.4	296	25.6		05.4	30	45.0		09.3
11	161	23.9	311	26.9	-18	06.1	45	45.8	+22	09.0
12	176	26.3	326	28.2	-18	06.9	60	46.7	+22	08.8
13	191	28.8	341	29.6		07.6	75	47.5		08.6
14	206	31.2	356	30.9		08.3	90	48.4		08.4
15	221	33.7	11	32.3		09.1	105	49.2		08.2
16	236	36.2	26	33.6		09.8	120	50.0		07.9
17	251	38.6	41	35.0	-18	10.5	135	50.9	+22	07.7
18	266	41.1	56	36.3	-18	11.2	150	51.7	+22	07.5
19	281	43.6	71	37.7		12.0	165	52.6		07.3
20	296	46.0	86	39.0		12.7	180	53.4		07.0
21	311	48.5	101	40.4		13.4	195	54.3		06.8
22	326	51.0	116	41.8		14.2	210	55.1		06.6
23	341	53.4	131	43.1		14.9	225	55.9		06.4
24	356	55.9	146	44.5	-18	15.6	240	56.8	+22	06.1
Dif	—		+13		-7		+8		-2	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☾ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 53.8 ^m			Edad: 7.9 ^d SD: 14'8 PMG: 18 ^h 36 ^m		PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3 Rº: 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	Rº	Hora	Rº		
h	° /	° /	° /	° /		° /		°	h m	h m	h m	h m	h m	h m	h m	h m	h m			
0	181	30.5	+1	33.3	90	39.6	99	-28	02.1	7	60 N	18 09	18 51	19 42	16 52	18	20 23	90		
1	196	30.7		32.3	105	08.5	100		01.4	8	58	08	47	35	16 19	26	20 56	81		
2	211	30.9		31.4	119	37.5	100	-28	00.5	9	56	07	44	29	15 54	31	21 21	76		
3	226	31.1		30.4	134	06.5	100	-27	59.4	11	54	06	42	24	34	34	40	73		
4	241	31.4		29.4	148	35.5	100		58.2	12	52	06	39	19	18	36	21	57	70	
5	256	31.6	+1	28.5	163	04.5	100	-27	56.9	13	50	18 05	18 37	19 15	15 03	39	22	11	68	
6	271	31.8	+1	27.5	177	33.5	100	-27	55.5	14	45	18 03	18 33	19 07	14 34	42	22	40	64	
7	286	32.0		26.5	192	02.5	100		53.9	16	40	02	29	19 01	14 12	43	23	02	62	
8	301	32.2		25.6	206	31.5	100		52.2	17	35	01	27	18 56	13 53	45		21	60	
9	316	32.5		24.6	221	00.6	101		50.3	19	30	18 00	24	52	36	47	23	37	58	
10	331	32.7		23.6	235	29.6	100		48.3	20	20	17 59	21	47	13 09	49	**	**	**	
11	346	32.9	+1	22.6	249	58.7	101	-27	46.2	21	10 N	17 58	18 19	18 43	12 45	51	**	**	**	
12	1	33.1	+1	21.7	264	27.8	101	-27	44.0	22	0	17 57	18 18	18 42	12 23	52	**	**	**	
13	16	33.4		20.7	278	57.0	102		41.6	24	10 S	56	17	42	12 01	54	0	19	52	
14	31	33.6		19.7	293	26.1	101		39.0	26	20	55	17	43	11 38	55	0	43	51	
15	46	33.8		18.8	307	55.3	102		36.4	26	30	55	19	46	11 10	57	1	11	49	
16	61	34.0		17.8	322	24.5	102		33.6	28	35	54	19	49	10 54	58		27	49	
17	76	34.3	+1	16.8	336	53.7	102	-27	30.7	29	40	17 54	18 21	18 52	10 35	60	1	46	48	
18	91	34.5	+1	15.9	351	22.9	102	-27	27.6	31	45	17 53	18 23	18 57	10 12	61	2	10	45	
19	106	34.7		14.9	5	52.2	103		24.5	31	50	53	25	19 03	9 42	65	3	9	44	
20	121	34.9		13.9	20	21.5	103		21.1	34	52	53	26	06	28	65	2	54	42	
21	136	35.1		12.9	34	50.8	103		17.7	34	54	52	28	09	9 11	67	3	11	41	
22	151	35.4		12.0	49	20.1	103		14.1	36	56	52	29	13	8 51	70	3	31	39	
23	166	35.6		11.0	63	49.5	104		10.4	37	58	52	31	18	8 25	74	3	57	35	
24	181	35.8	+1	10.0	78	18.9	104	-27	06.6	38	60 S	17 52	18 33	19 23	7 50	81	4	32	28	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG 0 ^h 08.3 ^m		Mag: -4.8 PMG: 14 ^h 09 ^m			Mag: +1.2 PMG: 7 ^h 54 ^m			Mag: -1.8 PMG: 9 ^h 27 ^m			Mag: +0.4 PMG: 0 ^h 58 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /						
0	357	55.0	147	18.0	-18	32.6	241	17.1	+22	00.7	217	56.5	+16	10.5	345	22.3	+2	27.1		
1	12	57.5	162	19.4		33.3	256	18.0		00.5	232	58.5		10.3	0	24.9		27.1		
2	28	00.0	177	20.9		34.0	271	18.8	+22	00.2	248	00.4		10.2	15	27.6		27.0		
3	43	02.4	192	22.3		34.7	286	19.7	+22	00.0	263	02.4		10.1	30	30.2		26.9		
4	58	04.9	207	23.7		35.4	301	20.5	+21	59.8	278	04.4		09.9	45	32.8		26.8		
5	73	07.3	222	25.2	-18	36.1	316	21.4	+21	59.5	293	06.4	+16	09.8	60	35.5	+2	26.8		
6	88	09.8	237	26.6	-18	36.8	331	22.2	+21	59.3	308	08.4	+16	09.6	75	38.1	+2	26.7		
7	103	12.3	252	28.0		37.5	346	23.1		59.1	323	10.3		09.5	90	40.7		26.6		
8	118	14.7	267	29.5		38.2	1	23.9		58.8	338	12.3		09.3	105	43.4		26.5		
9	133	17.2	282	30.9		38.9	16	24.8		58.6	353	14.3		09.2	120	46.0		26.5		
10	148	19.7	297	32.4		39.5	31	25.7		58.4	8	16.3		09.1	135	48.6		26.4		
11	163	22.1	312	33.8	-18	40.2	46	26.5	+21	58.1	23	18.3	+16	08.9	150	51.3	+2	26.3		
12	178	24.6	327	35.3	-18	40.9	61	27.4	+21	57.9	38	20.3	+16	08.8	165	53.9	+2	26.2		
13	193	27.1	342	36.7		41.6	76	28.2		57.7	53	22.2		08.6	180	56.5		26.2		
14	208	29.5	357	38.2		42.3	91	29.1		57.4	68	24.2		08.5	195	59.2		26.1		
15	223	32.0	12	39.7		43.0	106	29.9		57.2	83	26.2		08.3	211	01.8		26.0		
16	238	34.5	27	41.1		43.6	121	30.8		57.0	98	28.2		08.2	226	04.4		25.9		
17	253	36.9	42	42.6	-18	44.3	136	31.6	+21	56.7	113	30.2	+16	08.1	241	07.1	+2	25.9		
18	268	39.4	57	44.1	-18	45.0	151	32.5	+21	56.5	128	32.2	+16	07.9	256	09.7	+2	25.8		
19	283	41.8	72	45.5		45.7	166	33.3		56.3	143	34.1		07.8	271	12.3		25.7		
20	298	44.3	87	47.0		46.3	181	34.2		56.0	158	36.1		07.6	286	15.0		25.6		
21	313	46.8	102	48.5		47.0	196	35.1		55.8	173	38.1		07.5	301	17.6		25.5		
22	328	49.2	117	50.0		47.7	211	35.9		55.6	188	40.1		07.4	316	20.2		25.5		
23	343	51.7	132	51.5		48.4	226	36.8		55.3	203	42.1		07.2	331	22.9		25.4		
24	358	54.2	147	52.9	-18	49.0	241	37.6	+21	55.1	218	44.1	+16	07.1	346	25.5	+2	25.3		
Dif	—		+15		-7		+9		-2		+20		-1		+26		-1			

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 53.4 ^m			Edad: 8.9 ^d SD: 14 ^h 8 PMG: 19 ^h 26 ^m PHE { 4 ^h : 54 ^h 3 12 ^h : 54 ^h 4 20 ^h : 54 ^h 5 R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	181	35.8	+1	10.0	78	18.9	-27	06.6	40	60 N	4	07	4	58	5	39	17	08
1	196	36.0		09.1	92	48.3	-27	02.6	41	58	13	5	01	40	16	44	22	16
2	211	36.3		08.1	107	17.8	-26	58.5	40	56	19		04	41		24	18	35
3	226	36.5		07.1	121	47.3		54.3	42	54	24		06	42	16	07	22	22
4	241	36.7		06.2	136	16.8		49.9	44	52	29		09	43	15	53	25	23
5	256	36.9	+1	05.2	150	46.4	-26	45.4	45	50	4	33	5	11	5	43	15	40
6	271	37.1	+1	04.2	165	15.9	-26	40.8	46	45	4	41	5	15	5	45	15	14
7	286	37.4		03.2	179	45.6		36.1	47	40	47		18	46	14	54	35	**
8	301	37.6		02.3	194	15.2		31.2	49	35	52		21	46		36	38	**
9	316	37.8		01.3	208	44.9		26.2	50	30	4	55	23	47	14	22	40	**
10	331	38.0	+1	00.3	223	14.6		21.1	51	20	5	01	26	48	13	56	44	0
11	346	38.3	+0	59.4	237	44.4	-26	15.9	52	10 N	5	04	5	28	5	49	13	34
12	1	38.5	+0	58.4	252	14.2	-26	10.5	54	0	5	06	5	30	5	50	13	14
13	16	38.7		57.4	266	44.0	-26	05.0	55	10 S		06	30	51	12	53	52	1
14	31	38.9		56.4	281	13.9	-25	59.4	56	20		04	30	52		31	55	32
15	46	39.1		55.5	295	43.8		53.6	58	30	5	01	28	52	12	06	58	1
16	61	39.4		54.5	310	13.8		47.8	58	35	4	58	27	52	11	51	60	2
17	76	39.6	+0	53.5	324	43.8	-25	41.8	60	40	4	54	5	26	5	53	11	33
18	91	39.8	+0	52.6	339	13.8	-25	35.7	61	45	4	50	5	24	5	53	11	12
19	106	40.0		51.6	353	43.9		29.4	63	50		44	21	53	10	45	70	3
20	121	40.3		50.6	8	14.0		23.1	63	52	40		20	54		32	72	35
21	136	40.5		49.7	22	44.1		16.6	65	54	37		19	54	10	17	75	3
22	151	40.7		48.7	37	14.3		10.0	66	56	33		17	54	9	59	78	4
23	166	40.9		47.7	51	44.6	-25	03.3	67	58	29		15	54		37	84	30
24	181	41.1	+0	46.7	66	14.8	-24	56.5	68	60 S	4	24	5	13	5	54	9	09

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 04.4 ^m		Mag: -4.8 PMG: 14 ^h 07 ^m		Mag: +1.2 PMG: 7 ^h 53 ^m		Mag: -1.8 PMG: 9 ^h 24 ^m		Mag: +0.4 PMG: 0 ^h 54 ^m	
	hG ♂		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	358	54.2	147	52.9	-18	49.0	241	37.6	+21	55.1
1	13	56.6	162	54.4		49.7	256	38.5		54.9
2	28	59.1	177	55.9		50.4	271	39.3		54.6
3	44	01.6	192	57.4		51.0	286	40.2		54.4
4	59	04.0	207	58.9		51.7	301	41.1		54.2
5	74	06.5	223	00.4	-18	52.4	316	41.9	+21	53.9
6	89	08.9	238	01.9	-18	53.0	331	42.8	+21	53.7
7	104	11.4	253	03.4		53.7	346	43.6		53.5
8	119	13.9	268	04.9		54.3	1	44.5		53.2
9	134	16.3	283	06.4		55.0	16	45.4		53.0
10	149	18.8	298	07.9		55.7	31	46.2		52.7
11	164	21.3	313	09.4	-18	56.3	46	47.1	+21	52.5
12	179	23.7	328	11.0	-18	57.0	61	47.9	+21	52.3
13	194	26.2	343	12.5		57.6	76	48.8		52.0
14	209	28.7	358	14.0		58.3	91	49.7		51.8
15	224	31.1	13	15.5		58.9	106	50.5		51.6
16	239	33.6	28	17.1	-18	59.6	121	51.4		51.3
17	254	36.1	43	18.6	-19	00.2	136	52.3	+21	51.1
18	269	38.5	58	20.1	-19	00.9	151	53.1	+21	50.8
19	284	41.0	73	21.7		01.5	166	54.0		50.6
20	299	43.4	88	23.2		02.2	181	54.8		50.4
21	314	45.9	103	24.7		02.8	196	55.7		50.1
22	329	48.4	118	26.3		03.5	211	56.6		49.9
23	344	50.8	133	27.8		04.1	226	57.4		49.7
24	359	53.3	148	29.4	-19	04.8	241	58.3	+21	49.4
Dif	—		+15		-7		+9		-2	
							+20		-1	
									+26	
									-1	

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 15'9 PMG: 11 ^h 53.1 ^m			Edad: 9.9 ^d SD: 14'9 PMG: 20 ^h 14 ^m			PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'9 R°: 49 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m			
0	181	41.1	+0	46.7	66	14.8	-24	56.5	70	60 N	18	03	18	45	19	35	17	15	5	23	25	95
1	196	41.4		45.8	80	45.2	114	49.5	71	58	02		42		29	16	58		9		42	89
2	211	41.6		44.8	95	15.5	113	42.4	72	56	02		39		23	42	14			23	56	85
3	226	41.8		43.8	109	45.9	114	35.2	73	54	01		37		19	29	18			**	**	**
4	241	42.0		42.9	124	16.4	115	27.9	74	52	01		35		14	18	20			**	**	**
5	256	42.3	+0	41.9	138	46.9	115	-24	20.5	50	18	01	18	33	19	11	16	08	23	**	**	**
6	271	42.5	+0	40.9	153	17.4	115	-24	13.0	45	18	00	18	29	19	03	15	46	28	**	**	**
7	286	42.7		39.9	167	48.0	116	-24	05.3	40	17	59	26	18	58	29	32		0	03	65	
8	301	42.9		39.0	182	18.6	116	-23	57.6	35	58		24		53	14	35			19	62	
9	316	43.1		38.0	196	49.3	117		49.7	30	58		22		50	15	02	37		34	59	
10	331	43.4		37.0	211	20.0	117		41.7	20	57		19		45	14	40	41		0	58	56
11	346	43.6	+0	36.1	225	50.8	118	-23	33.6	10 N	17	57	18	18	18	42	14	21	45	1	18	53
12	1	43.8	+0	35.1	240	21.6	118	-23	25.3	0	17	56	18	17	18	41	14	03	49	1	38	49
13	16	44.0		34.1	254	52.4	118		17.0	84	56		17		41	13	45	52	1	57	46	
14	31	44.3		33.1	269	23.3	119	-23	08.6	20	56		18		43	26	56			2	18	43
15	46	44.5		32.2	283	54.2	119	-23	00.0	30	56		20	47	13	04	60			41	39	
16	61	44.7		31.2	298	25.2	120	-22	51.3	35	56		21		50	12	51	62	2	55	37	
17	76	44.9	+0	30.2	312	56.3	121	-22	42.6	40	17	56	18	23	18	54	12	35	66	3	11	34
18	91	45.1	+0	29.3	327	27.3	121	-22	33.7	45	17	56	18	25	18	59	12	17	70	3	30	30
19	106	45.4		28.3	341	58.5	122		24.7	50	56		28	19	06	11	55	74	3	53	26	
20	121	45.6		27.3	356	29.6	121		15.6	52	56		30	09		44	77			4	05	23
21	136	45.8		26.3	11	00.8	122	-22	06.4	92	56		31	13		32	80			17	21	
22	151	46.0		25.4	25	32.1	123	-21	57.1	93	56		33	17		17	84			32	17	
23	166	46.3		24.4	40	03.4	123		47.7	94	58		35	22		11	01	88	4	49	12	
24	181	46.5	+0	23.4	54	34.7	123	-21	38.2	60 S	17	56	18	38	19	28	10	41	94	5	10	6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 0 ^h 00.4 ^m		Mag: -4.8 PMG: 14 ^h 05 ^m		Mag: +1.2 PMG: 7 ^h 52 ^m		Mag: -1.8 PMG: 9 ^h 21 ^m		Mag: +0.4 PMG: 0 ^h 50 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	359	53.3	148	29.4	-19	04.8	241	58.3	+21	49.4
1	14	55.8	163	30.9		05.4	256	59.2		49.2
2	29	58.2	178	32.5		06.0	272	00.0		48.9
3	45	00.7	193	34.0		06.7	287	00.9		48.7
4	60	03.2	208	35.6		07.3	302	01.8		48.4
5	75	05.6	223	37.2	-19	07.9	317	02.6	+21	48.2
6	90	08.1	238	38.7	-19	08.6	332	03.5	+21	48.0
7	105	10.6	253	40.3		09.2	347	04.4		47.7
8	120	13.0	268	41.9		09.8	2	05.2		47.5
9	135	15.5	283	43.4		10.5	17	06.1		47.2
10	150	17.9	298	45.0		11.1	32	07.0		47.0
11	165	20.4	313	46.6	-19	11.7	47	07.8	+21	46.8
12	180	22.9	328	48.2	-19	12.4	62	08.7	+21	46.5
13	195	25.3	343	49.8		13.0	77	09.6		46.3
14	210	27.8	358	51.3		13.6	92	10.4		46.0
15	225	30.3	13	52.9		14.2	107	11.3		45.8
16	240	32.7	28	54.5		14.8	122	12.2		45.5
17	255	35.2	43	56.1	-19	15.5	137	13.0	+21	45.3
18	270	37.7	58	57.7	-19	16.1	152	13.9	+21	45.1
19	285	40.1	73	59.3		16.7	167	14.8		44.8
20	300	42.6	89	00.9		17.3	182	15.6		44.6
21	315	45.0	104	02.5		17.9	197	16.5		44.3
22	330	47.5	119	04.1		18.6	212	17.4		44.1
23	345	50.0	134	05.7		19.2	227	18.3		43.8
24	0	52.4	149	07.4	-19	19.8	242	19.1	+21	43.6
Dif	—		+16		-6		+9		-2	
							+20		-1	
									+26	
									-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG:11 ^h 52.7 ^m			Edad: 10.9 ^d SD: 15'0 PMG: 21 ^h 01 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	181	46.5	+0	54	34.7	-21	38.2	97	60 N	4	12	5	02	5	44	17	18
1	196	46.7		69	06.1 ¹²⁴		28.5	97	58	18		05	45	17	06	5	
2	211	46.9		83	37.6 ¹²⁵		18.8	98	56	23		08	45	16	55	9	
3	226	47.1		98	09.0 ¹²⁴	-21	09.0	98	54	28		10	46	45	12	0	09
4	241	47.4		112	40.6 ¹²⁶	-20	59.1	99	52	32		12	46	37	15	20	77
5	256	47.6	+0	127	12.1 ¹²⁵	-20	49.0	101	50	4	36	5	14	5	46	16	29
6	271	47.8	+0	141	43.8 ¹²⁷	-20	38.9	101	45	4	43	5	18	5	47	16	13
7	286	48.0		156	15.4 ¹²⁶		28.7	102	40	49		20	47	15	59	26	
8	301	48.2		170	47.1 ¹²⁷		18.3	104	35	53		23	48	48	29	20	61
9	316	48.5		185	18.8 ¹²⁷	-20	07.9	104	30	4	57	24	48	37	33	32	59
10	331	48.7		199	50.6 ¹²⁸	-19	57.4	105	20	5	01	27	49	20	37	1	52
11	346	48.9	+0	214	22.5 ¹²⁹	-19	46.8	106	10 N	5	04	5	28	5	49	15	05
12	1	49.1	+0	228	54.3 ¹²⁸	-19	36.1	107	0	5	05	5	29	5	49	14	50
13	16	49.3		243	26.2 ¹²⁹		25.3	108	10 S	04		29	50	36	49	42	43
14	31	49.6		257	58.2 ¹³⁰		14.4	109	20	5	02	28	50	20	54	2	59
15	46	49.8		272	30.2 ¹³⁰	-19	03.4	110	30	4	58	26	50	14	02	59	3
16	61	50.0		287	02.2 ¹³⁰	-18	52.3	111	35	55		24	50	13	52	61	30
17	76	50.2	+0	301	34.3 ¹³¹	-18	41.1	112	40	4	51	5	22	5	49	13	40
18	91	50.5	+0	316	06.4 ¹³¹	-18	29.8	113	45	4	46	5	20	5	49	13	26
19	106	50.7		330	38.6 ¹³²		18.4	114	50	39		17	49	08	75	4	18
20	121	50.9		345	10.8 ¹³²	-18	07.0	114	52	36		15	49	13	00	77	26
21	136	51.1		359	43.0 ¹³²	-17	55.4	116	54	32		14	49	12	50	81	36
22	151	51.3		14	15.3 ¹³³		43.8	116	56	28		12	49	40	84	4	47
23	166	51.6		28	47.6 ¹³³		32.1	117	58	23		09	48	28	88	5	00
24	181	51.8	+0	43	19.9 ¹³³	-17	20.3	118	60 S	4	17	5	07	5	48	12	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 52.6 ^m		Mag: -4.8 PMG: 14 ^h 02 ^m		Mag: +1.2 PMG: 7 ^h 50 ^m		Mag: -1.8 PMG: 9 ^h 17 ^m		Mag: +0.4 PMG: 0 ^h 46 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	0	52.4	149	07.4	-19	19.8	242	19.1	+21	43.6
1	15	54.9	164	09.0		20.4	257	20.0		43.4
2	30	57.4	179	10.6		21.0	272	20.9		43.1
3	45	59.8	194	12.2		21.6	287	21.7		42.9
4	61	02.3	209	13.8		22.2	302	22.6		42.6
5	76	04.8	224	15.5	-19	22.8	317	23.5	+21	42.4
6	91	07.2	239	17.1	-19	23.4	332	24.4	+21	42.1
7	106	09.7	254	18.7		24.0	347	25.2		41.9
8	121	12.2	269	20.4		24.6	2	26.1		41.6
9	136	14.6	284	22.0		25.2	17	27.0		41.4
10	151	17.1	299	23.7		25.8	32	27.9		41.1
11	166	19.5	314	25.3	-19	26.4	47	28.7	+21	40.9
12	181	22.0	329	27.0	-19	27.0	62	29.6	+21	40.6
13	196	24.5	344	28.6		27.6	77	30.5		40.4
14	211	26.9	359	30.3		28.2	92	31.4		40.2
15	226	29.4	14	31.9		28.8	107	32.2		39.9
16	241	31.9	29	33.6		29.4	122	33.1		39.7
17	256	34.3	44	35.2	-19	30.0	137	34.0	+21	39.4
18	271	36.8	59	36.9	-19	30.6	152	34.9	+21	39.2
19	286	39.3	74	38.6		31.2	167	35.7		38.9
20	301	41.7	89	40.2		31.7	182	36.6		38.7
21	316	44.2	104	41.9		32.3	197	37.5		38.4
22	331	46.7	119	43.6		32.9	212	38.4		38.2
23	346	49.1	134	45.3		33.5	227	39.2		37.9
24	1	51.6	149	47.0	-19	34.1	242	40.1	+21	37.7
Dif	—		+17		-6		+9		-2	
							+20		-1	
									+26	
									-1	

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 52.4 ^m			Edad: 11.9 ^d SD: 15'1 PMG: 21 ^h 46 ^m PHE { 4 ^h : 55'5 12 ^h : 55'7 20 ^h : 55'9 R°: 46 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Civil	Náutico		Hora	R°		Hora	R°	
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	m	m	h m	m	m		
0	181	51.8	+0	00.1	43	19.9	-17	20.3	60 N	17 57	18 38	19 28	17 19	2	0 58	94			
1	196	52.0	-0	00.9	57	52.3	-17	08.4	58	57	36	22	11	5	1 10	89			
2	211	52.2		01.9	72	24.7	-16	56.4	56	57	34	18	17	04	8	20	85		
3	226	52.4		02.8	86	57.2		44.4	54	56	32	13	16	57	12	29	81		
4	241	52.7		03.8	101	29.7		32.2	52	56	30	10	52	13	37	78			
5	256	52.9	-0	04.8	116	02.2	-16	20.0	50	17 56	18 28	19 06	16 46	16	1 44	76			
6	271	53.1	-0	05.8	130	34.7	-16	07.7	45	17 56	18 25	18 59	16 35	21	1 59	71			
7	286	53.3		06.7	145	07.3	-15	55.3	40	56	23	54	25	25	2 11	67			
8	301	53.5		07.7	159	39.9		42.8	35	56	21	50	17	29	21	64			
9	316	53.8		08.7	174	12.6		30.3	30	55	19	47	16	10	31	31	60		
10	331	54.0		09.6	188	45.3		17.6	20	55	17	43	15	57	37	2 46	55		
11	346	54.2	-0	10.6	203	18.0	-15	04.9	10 N	17 55	18 16	18 41	15 46	41	3 00	50			
12	1	54.4	-0	11.6	217	50.7	-14	52.2	0	17 56	18 16	18 40	15 36	45	3 12	46			
13	16	54.6		12.6	232	23.5		39.3	10 S	56	17	41	25	50	25	42			
14	31	54.9		13.5	246	56.3		26.4	20	56	18	44	14	55	38	37			
15	46	55.1		14.5	261	29.2		13.4	30	57	21	49	15	01	60	3 53	32		
16	61	55.3		15.5	276	02.0	-14	00.3	35	57	22	52	14	53	64	4 01	30		
17	76	55.5	-0	16.5	290	34.9	-13	47.1	40	17 58	18 25	18 56	14 45	67	4 11	26			
18	91	55.7	-0	17.4	305	07.8	-13	33.9	45	17 58	18 27	19 02	14 35	71	4 23	22			
19	106	56.0		18.4	319	40.8		20.6	50	59	31	09	23	76	37	17			
20	121	56.2		19.4	334	13.7	-13	07.2	52	17 59	33	13	17	79	43	15			
21	136	56.4		20.3	348	46.7	-12	53.8	54	18 00	35	17	11	81	50	12			
22	151	56.6		21.3	3	19.7		40.3	56	00	37	22	14	04	85	4 58	9		
23	166	56.8		22.3	17	52.7		26.7	58	00	40	27	13	56	88	5 07	6		
24	181	57.1	-0	23.3	32	25.8	-12	13.1	60 S	18 01	18 43	19 33	13 47	92	5 17	2			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 48.6 ^m		Mag: -4.8 PMG: 13 ^h 59 ^m		Mag: +1.2 PMG: 7 ^h 49 ^m		Mag: -1.8 PMG: 9 ^h 14 ^m		Mag: +0.4 PMG: 0 ^h 42 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	1	51.6	149	47.0	-19	34.1	221	07.3	+15	56.9
1	16	54.0	164	48.7		34.7	236	09.3		56.8
2	31	56.5	179	50.3		35.2	251	11.2		56.6
3	46	59.0	194	52.0		35.8	266	13.2		56.5
4	62	01.4	209	53.7		36.4	281	15.2		56.4
5	77	03.9	224	55.4	-19	37.0	296	17.2	+15	56.2
6	92	06.4	239	57.1	-19	37.5	311	19.2	+15	56.1
7	107	08.8	254	58.8		38.1	326	21.2		55.9
8	122	11.3	270	00.5		38.7	341	23.2		55.8
9	137	13.8	285	02.2		39.2	356	25.2		55.7
10	152	16.2	300	04.0		39.8	11	27.2		55.5
11	167	18.7	315	05.7	-19	40.4	26	29.2	+15	55.4
12	182	21.1	330	07.4	-19	40.9	41	31.2	+15	55.2
13	197	23.6	345	09.1		41.5	56	33.2		55.1
14	212	26.1	0	10.8		42.1	71	35.2		55.0
15	227	28.5	15	12.6		42.6	86	37.2		54.8
16	242	31.0	30	14.3		43.2	101	39.2		54.7
17	257	33.5	45	16.0	-19	43.8	116	41.2	+15	54.5
18	272	35.9	60	17.8	-19	44.3	131	43.2	+15	54.4
19	287	38.4	75	19.5		44.9	146	45.2		54.3
20	302	40.9	90	21.3		45.4	161	47.2		54.1
21	317	43.3	105	23.0		46.0	176	49.2		54.0
22	332	45.8	120	24.7		46.5	191	51.1		53.9
23	347	48.3	135	26.5		47.1	206	53.1		53.7
24	2	50.7	150	28.3	-19	47.6	221	55.1	+15	53.6
Dif	—		+17		-6		+20		-1	
					+9					-1

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'9 PMG: 11 ^h 52.0 ^m			Edad: 12.9 ^d SD: 15'3 PMG: 22 ^h 30 ^m PHE 4^h: 56'2 12^h: 56'4 20^h: 56'6 Rº: 45^m																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil		Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°		h	m	m	h	m	m	h	m	m	
0	181	57.1	-0	23.3	32	25.8	-12	13.1	60 N	4	17	5	49	17	19	0	2	30	91	
1	196	57.3		24.2	46	58.9	141	-11	59.4	58	23	10	49	15	3		37	87		
2	211	57.5		25.2	61	32.0	141		45.6	56	28	12	49	11	6		43	84		
3	226	57.7		26.2	76	05.1	141		31.8	54	32	14	49	07	9		49	81		
4	241	57.9		27.2	90	38.2	141		17.9	52	36	15	49	04	11		54	78		
5	256	58.1	-0	28.1	105	11.3	141	-11	03.9	50	4	39	5	49	17	01	14	2	59	75
6	271	58.4	-0	29.1	119	44.5	142	-10	49.9	45	4	46	5	49	16	54	19	3	08	70
7	286	58.6		30.1	134	17.7	142		35.8	40	51	22	49	49	22		16	66		
8	301	58.8		31.0	148	50.9	142		21.7	35	55	24	49	44	26		23	62		
9	316	59.0		32.0	163	24.1	142	-10	07.5	30	4	58	25	49	40	29		29	59	
10	331	59.2		33.0	177	57.3	142	-9	53.2	20	5	02	27	49	33	34		40	53	
11	346	59.5	-0	34.0	192	30.5	142	-9	38.9	10 N	5	04	5	49	16	26	40	3	49	48
12	1	59.7	-0	34.9	207	03.8	143	-9	24.5	0	5	04	5	49	16	20	44	3	57	44
13	16	59.9		35.9	221	37.0	142	-9	10.1	10 S	03	27	48	14	49		4	05	40	
14	32	00.1		36.9	236	10.3	143	-8	55.6	20	5	00	26	48	07	54		14	35	
15	47	00.3		37.9	250	43.6	143		41.1	30	4	55	23	47	16	00	59	24	29	
16	62	00.6		38.8	265	16.9	143		26.5	35	52	21	47	15	55	63		30	26	
17	77	00.8	-0	39.8	279	50.1	142	-8	11.9	40	4	48	5	46	15	50	67	4	36	23
18	92	01.0	-0	40.8	294	23.4	143	-7	57.2	45	4	42	5	45	15	45	70	4	43	19
19	107	01.2		41.8	308	56.7	143		42.5	50	34	12	45	38	76		52	14		
20	122	01.4		42.7	323	30.0	143		27.7	52	31	11	44	35	78		4	56	12	
21	137	01.6		43.7	338	03.3	143	-7	12.8	54	27	09	44	31	81		5	01	9	
22	152	01.9		44.7	352	36.6	143	-6	58.0	56	22	06	43	27	84		06	6		
23	167	02.1		45.6	7	09.9	143		43.1	58	17	04	43	23	87		11	4		
24	182	02.3	-0	46.6	21	43.2	143	-6	28.1	60 S	4	10	5	01	15	18	91	5	17	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 23 ^h 44.7 ^m		Mag: -4.8 PMG: 13 ^h 56 ^m		Mag: +1.2 PMG: 7 ^h 47 ^m		Mag: -1.9 PMG: 9 ^h 11 ^m		Mag: +0.4 PMG: 0 ^h 37 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	2	50.7	150	28.3	-19	47.6	243	01.3	+21	31.6	221	55.1	+15	53.6	350	38.5	+2	18.0	
1	17	53.2	165	30.0		48.2	258	02.2		31.4	236	57.1		53.4	5	41.2		17.9	
2	32	55.6	180	31.8		48.7	273	03.1		31.1	251	59.1		53.3	20	43.8		17.8	
3	47	58.1	195	33.5		49.3	288	03.9		30.9	267	01.1		53.2	35	46.4		17.7	
4	63	00.6	210	35.3		49.8	303	04.8		30.6	282	03.1		53.0	50	49.1		17.7	
5	78	03.0	225	37.1	-19	50.3	318	05.7	+21	30.4	297	05.1	+15	52.9	65	51.7	+2	17.6	
6	93	05.5	240	38.8	-19	50.9	333	06.6	+21	30.1	312	07.1	+15	52.7	80	54.4	+2	17.5	
7	108	08.0	255	40.6		51.4	348	07.5		29.8	327	09.1		52.6	95	57.0		17.4	
8	123	10.4	270	42.4		52.0	3	08.4		29.6	342	11.1		52.5	110	59.6		17.4	
9	138	12.9	285	44.2		52.5	18	09.3		29.3	357	13.1		52.3	126	02.3		17.3	
10	153	15.4	300	46.0		53.0	33	10.1		29.1	12	15.1		52.2	141	04.9		17.2	
11	168	17.8	315	47.8	-19	53.6	48	11.0	+21	28.8	27	17.1	+15	52.0	156	07.6	+2	17.1	
12	183	20.3	330	49.5	-19	54.1	63	11.9	+21	28.6	42	19.1	+15	51.9	171	10.2	+2	17.0	
13	198	22.8	345	51.3		54.6	78	12.8		28.3	57	21.1		51.8	186	12.8		17.0	
14	213	25.2	0	53.1		55.2	93	13.7		28.0	72	23.1		51.6	201	15.5		16.9	
15	228	27.7	15	54.9		55.7	108	14.6		27.8	87	25.1		51.5	216	18.1		16.8	
16	243	30.1	30	56.7		56.2	123	15.5		27.5	102	27.1		51.3	231	20.8		16.7	
17	258	32.6	45	58.6	-19	56.7	138	16.4	+21	27.3	117	29.1	+15	51.2	246	23.4	+2	16.7	
18	273	35.1	61	00.4	-19	57.3	153	17.3	+21	27.0	132	31.1	+15	51.1	261	26.0	+2	16.6	
19	288	37.5	76	02.2		57.8	168	18.2		26.8	147	33.1		50.9	276	28.7		16.5	
20	303	40.0	91	04.0		58.3	183	19.0		26.5	162	35.1		50.8	291	31.3		16.4	
21	318	42.5	106	05.8		58.8	198	19.9		26.2	177	37.1		50.6	306	33.9		16.3	
22	333	44.9	121	07.6		59.3	213	20.8		26.0	192	39.1		50.5	321	36.6		16.3	
23	348	47.4	136	09.5	-19	59.9	228	21.7		25.7	207	41.1		50.4	336	39.2		16.2	
24	3	49.9	151	11.3	-20	00.4	243	22.6	+21	25.5	222	43.1	+15	50.2	351	41.9	+2	16.1	
Dif	—		+18		-5		+9		-3		+20		-1		+26		-		

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG:11 ^h 51.7 ^m			Edad: 13.9 ^d SD: 15'4 PMG: 23 ^h 15 ^m			PHE { 4 ^h : 56'8 12 ^h : 57'0 20 ^h : 57'2 Rº: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	Rº	Hora	Rº		
h	º	'	º	'	º	'	º	'	º	h m	h m	h m	h m m	h m m	h m m				
0	182	02.3	-0	46.6	21	43.2	-6	28.1	150	60 N	17 51	18 32	19 22	17 19	1	4 01	93		
1	197	02.5		47.6	36	16.5	143	-6	13.1	151	58	51	30	16	18	5	04	90	
2	212	02.7		48.6	50	49.8	143	-5	58.0	150	56	51	28	12	17	8	07	86	
3	227	02.9		49.5	65	23.1	143		43.0	150	54	51	27	08	16	10	10	83	
4	242	03.2		50.5	79	56.4	143		27.8	152	52	52	25	05	15	13	12	80	
5	257	03.4	-0	51.5	94	29.7	143	-5	12.7	151	50	17 52	18 24	19 02	17 15	15	4 14	78	
6	272	03.6	-0	52.5	109	03.0	143	-4	57.5	152	45	17 52	18 21	18 55	17 13	20	4 18	73	
7	287	03.8		53.4	123	36.3	143		42.2	153	40	52	19	51	11	25	22	68	
8	302	04.0		54.4	138	09.6	143		26.9	153	35	53	18	47	10	28	25	65	
9	317	04.3		55.4	152	42.8	142	-4	11.6	153	30	53	17	45	09	31	28	61	
10	332	04.5		56.3	167	16.1	143	-3	56.3	153	20	54	16	41	07	37	33	55	
11	347	04.7	-0	57.3	181	49.3	142	-3	40.9	154	10 N	17 54	18 15	18 40	17 06	41	4 37	51	
12	2	04.9	-0	58.3	196	22.5	142	-3	25.5	154	0	17 55	18 16	18 40	17 04	46	4 41	46	
13	17	05.1	-0	59.3	210	55.7	142	-3	10.1	154	10 S	56	17	41	03	51	45	41	
14	32	05.3	-1	00.2	225	28.9	142	-2	54.6	155	20	57	19	44	17	01	56	49	36
15	47	05.6		01.2	240	02.1	142		39.1	155	30	58	22	50	16	59	62	53	31
16	62	05.8		02.2	254	35.3	142		23.6	155	35	17 59	24	54	58	65	56	27	
17	77	06.0	-1	03.2	269	08.4	141	-2	08.1	155	40	18 00	18 27	18 58	16 57	69	4 59	24	
18	92	06.2	-1	04.1	283	41.5	141	-1	52.5	156	45	18 01	18 30	19 05	16 55	74	5 02	20	
19	107	06.4		05.1	298	14.6	141		36.9	156	50	02	34	13	54	79	06	15	
20	122	06.6		06.1	312	47.7	141		21.3	156	52	02	36	16	53	82	08	13	
21	137	06.9		07.1	327	20.8	141	-1	05.6	157	54	03	39	21	52	84	10	10	
22	152	07.1		08.0	341	53.8	140	-0	50.0	156	56	04	41	26	51	88	12	8	
23	167	07.3		09.0	356	26.8	140		34.3	157	58	05	44	32	50	91	15	4	
24	182	07.5	-1	10.0	10	59.8	140	-0	18.6	157	60 S	18 06	18 48	19 38	16 49	95	5 17	1	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 40.8 ^m			Mag: -4.8 PMG: 13 ^h 54 ^m			Mag: +1.2 PMG: 7 ^h 46 ^m			Mag: -1.9 PMG: 9 ^h 08 ^m			Mag: +0.4 PMG: 0 ^h 33 ^m						
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	º	'	º	º	'	º	º	'	º	º	'	º	º	'	º	º	'		
0	3	49.9	151	11.3	-20	00.4	243	22.6	+21	25.5	222	43.1	+15	50.2	351	41.9	+2	16.1	
1	18	52.3	166	13.1		00.9	258	23.5		25.2	237	45.1		50.1	6	44.5		16.0	
2	33	54.8	181	15.0		01.4	273	24.4		25.0	252	47.1		50.0	21	47.1		16.0	
3	48	57.2	196	16.8		01.9	288	25.3		24.7	267	49.1		49.8	36	49.8		15.9	
4	63	59.7	211	18.6		02.4	303	26.2		24.4	282	51.1		49.7	51	52.4		15.8	
5	79	02.2	226	20.5	-20	02.9	318	27.1	+21	24.2	297	53.1	+15	49.5	66	55.1	+2	15.7	
6	94	04.6	241	22.3	-20	03.4	333	28.0	+21	23.9	312	55.1	+15	49.4	81	57.7	+2	15.6	
7	109	07.1	256	24.2		03.9	348	28.9		23.7	327	57.1		49.3	97	00.3		15.6	
8	124	09.6	271	26.0		04.4	3	29.8		23.4	342	59.1		49.1	112	03.0		15.5	
9	139	12.0	286	27.9		04.9	18	30.6		23.1	358	01.1		49.0	127	05.6		15.4	
10	154	14.5	301	29.7		05.4	33	31.5		22.9	13	03.1		48.8	142	08.3		15.3	
11	169	17.0	316	31.6	-20	05.9	48	32.4	+21	22.6	28	05.1	+15	48.7	157	10.9	+2	15.3	
12	184	19.4	331	33.5	-20	06.4	63	33.3	+21	22.4	43	07.1	+15	48.6	172	13.5	+2	15.2	
13	199	21.9	346	35.3		06.9	78	34.2		22.1	58	09.1		48.4	187	16.2		15.1	
14	214	24.4	1	37.2		07.4	93	35.1		21.8	73	11.1		48.3	202	18.8		15.0	
15	229	26.8	16	39.1		07.9	108	36.0		21.6	88	13.1		48.2	217	21.5		15.0	
16	244	29.3	31	41.0		08.4	123	36.9		21.3	103	15.1		48.0	232	24.1		14.9	
17	259	31.7	46	42.9	-20	08.9	138	37.8	+21	21.0	118	17.1	+15	47.9	247	26.7	+2	14.8	
18	274	34.2	61	44.7	-20	09.4	153	38.7	+21	20.8	133	19.1	+15	47.7	262	29.4	+2	14.7	
19	289	36.7	76	46.6		09.9	168	39.6		20.5	148	21.1		47.6	277	32.0		14.6	
20	304	39.1	91	48.5		10.4	183	40.5		20.3	163	23.1		47.5	292	34.7		14.6	
21	319	41.6	106	50.4		10.9	198	41.4		20.0	178	25.1		47.3	307	37.3		14.5	
22	334	44.1	121	52.3		11.3	213	42.3		19.7	193	27.1		47.2	322	39.9		14.4	
23	349	46.5	136	54.2		11.8	228	43.2		19.5	208	29.1		47.0	337	42.6		14.3	
24	4	49.0	151	56.1	-20	12.3	243	44.1	+21	19.2	223	31.1	+15	46.9	352	45.2	+2	14.3	
Dif	—			+19			-5			+9			-3			+20		-1	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 51.3 ^m			Edad: 14.9 ^d PHE { 4 ^h : 57'5 12 ^h : 57'7 20 ^h : 57'9 R°: 47 ^m PMG: **h **m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	182	07.5	-1	10.0	10	59.8	-0	18.6	60 N	4	22	5	53	17	19	0	5	33
1	197	07.7		10.9	25	32.8 ¹⁴⁰	-0	02.9 ¹⁵⁷	58	28	14	53	21	4	32	91		
2	212	07.9		11.9	40	05.7 ¹³⁹	+0	12.8 ¹⁵⁷	56	32	16	53	23	7	32	87		
3	227	08.1		12.9	54	38.6 ¹³⁹		28.5 ¹⁵⁷	54	36	17	53	25	10	31	84		
4	242	08.4		13.9	69	11.5 ¹³⁹	+0	44.3 ¹⁵⁸	52	39	19	52	27	12	31	81		
5	257	08.6	-1	14.8	83	44.3 ¹³⁸	+1	00.0 ¹⁵⁷	50	4	42	5	52	17	28	15	5	31
6	272	08.8	-1	15.8	98	17.1 ¹³⁸	+1	15.8 ¹⁵⁸	45	4	48	5	52	17	31	21	5	30
7	287	09.0		16.8	112	49.9 ¹³⁸		31.6 ¹⁵⁸	40	53	24	51	34	25	29	69		
8	302	09.2		17.8	127	22.7 ¹³⁸	+1	47.4 ¹⁵⁸	35	56	26	51	37	28	28	65		
9	317	09.4		18.7	141	55.4 ¹³⁷	+2	03.2 ¹⁵⁸	30	4	59	27	50	39	31	28	61	
10	332	09.7		19.7	156	28.0 ¹³⁶		19.0 ¹⁵⁸	20	5	02	28	50	42	38	27	56	
11	347	09.9	-1	20.7	171	00.7 ¹³⁷	+2	34.8 ¹⁵⁸	10 N	5	04	5	49	17	46	42	5	26
12	2	10.1	-1	21.6	185	33.3 ¹³⁶	+2	50.6 ¹⁵⁸	0	5	03	5	48	17	49	47	5	25
13	17	10.3		22.6	200	05.8 ¹³⁵	+3	06.4 ¹⁵⁸	10 S	5	02	26	47	52	52	24	41	
14	32	10.5		23.6	214	38.3 ¹³⁵		22.2 ¹⁵⁸	20	4	58	24	46	17	56	57	24	36
15	47	10.7		24.6	229	10.8 ¹³⁵		38.0 ¹⁵⁸	30	53	21	45	18	00	62	23	30	
16	62	10.9		25.5	243	43.2 ¹³⁴	+3	53.8 ¹⁵⁸	35	49	19	44	02	66	22	27		
17	77	11.2	-1	26.5	258	15.6 ¹³⁴	+4	09.6 ¹⁵⁸	40	4	44	5	43	18	05	70	5	21
18	92	11.4	-1	27.5	272	47.9 ¹³³	+4	25.3 ¹⁵⁷	45	4	38	5	42	18	08	75	5	21
19	107	11.6		28.5	287	20.2 ¹³³		41.1 ¹⁵⁸	50	30	08	40	11	81	20	14		
20	122	11.8		29.4	301	52.5 ¹³³	+4	56.9 ¹⁵⁸	52	26	06	40	13	83	19	12		
21	137	12.0		30.4	316	24.7 ¹³²	+5	12.7 ¹⁵⁸	54	21	03	39	15	86	19	9		
22	152	12.2		31.4	330	56.8 ¹³¹		28.4 ¹⁵⁷	56	16	5	01	38	17	89	18	7	
23	167	12.4		32.3	345	28.9 ¹³¹		44.1 ¹⁵⁷	58	10	4	58	37	19	93	18	3	
24	182	12.7	-1	33.3	0	00.9 ¹³⁰	+5	59.9 ¹⁵⁸	60 S	4	04	4	54	18	22	97	5	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 36.9 ^m		Mag: -4.8 PMG: 13 ^h 50 ^m		Mag: +1.2 PMG: 7 ^h 45 ^m		Mag: -1.9 PMG: 9 ^h 05 ^m		Mag: +0.4 PMG: 0 ^h 29 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	4	49.0	151	56.1	-20	12.3	243	44.1	+21	19.2	223	31.1	+15	46.9	352	45.2	+2	14.3
1	19	51.5	166	58.0		12.8	258	45.0		18.9	238	33.2		46.8	7	47.9		14.2
2	34	53.9	182	00.0		13.3	273	45.9		18.7	253	35.2		46.6	22	50.5		14.1
3	49	56.4	197	01.9		13.7	288	46.8		18.4	268	37.2		46.5	37	53.1		14.0
4	64	58.8	212	03.8		14.2	303	47.7		18.2	283	39.2		46.4	52	55.8		13.9
5	80	01.3	227	05.7	-20	14.7	318	48.6	+21	17.9	298	41.2	+15	46.2	67	58.4	+2	13.9
6	95	03.8	242	07.6	-20	15.2	333	49.5	+21	17.6	313	43.2	+15	46.1	83	01.1	+2	13.8
7	110	06.2	257	09.6		15.6	348	50.4		17.4	328	45.2		45.9	98	03.7		13.7
8	125	08.7	272	11.5		16.1	3	51.3		17.1	343	47.2		45.8	113	06.3		13.6
9	140	11.2	287	13.4		16.6	18	52.2		16.8	358	49.2		45.7	128	09.0		13.6
10	155	13.6	302	15.4		17.0	33	53.1		16.6	13	51.2		45.5	143	11.6		13.5
11	170	16.1	317	17.3	-20	17.5	48	54.0	+21	16.3	28	53.2	+15	45.4	158	14.3	+2	13.4
12	185	18.6	332	19.2	-20	17.9	63	54.9	+21	16.0	43	55.2	+15	45.3	173	16.9	+2	13.3
13	200	21.0	347	21.2		18.4	78	55.8		15.8	58	57.2		45.1	188	19.6		13.2
14	215	23.5	2	23.1		18.9	93	56.7		15.5	73	59.2		45.0	203	22.2		13.2
15	230	26.0	17	25.1		19.3	108	57.6		15.2	89	01.2		44.8	218	24.8		13.1
16	245	28.4	32	27.1		19.8	123	58.5		15.0	104	03.2		44.7	233	27.5		13.0
17	260	30.9	47	29.0	-20	20.2	138	59.4	+21	14.7	119	05.2	+15	44.6	248	30.1	+2	12.9
18	275	33.3	62	31.0	-20	20.7	154	00.3	+21	14.4	134	07.2	+15	44.4	263	32.8	+2	12.9
19	290	35.8	77	33.0		21.1	169	01.2		14.2	149	09.2		44.3	278	35.4		12.8
20	305	38.3	92	34.9		21.6	184	02.1		13.9	164	11.2		44.2	293	38.0		12.7
21	320	40.7	107	36.9		22.0	199	03.1		13.6	179	13.3		44.0	308	40.7		12.6
22	335	43.2	122	38.9		22.5	214	04.0		13.4	194	15.3		43.9	323	43.3		12.5
23	350	45.7	137	40.9		22.9	229	04.9		13.1	209	17.3		43.7	338	46.0		12.5
24	5	48.1	152	42.8	-20	23.4	244	05.8	+21	12.8	224	19.3	+15	43.6	353	48.6	+2	12.4
Dif	—		+19		-5		+9		-3		+20		-1		+26		-	

UT	SOL			☾ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 51.0 ^m			Edad: 15.9 ^d SD: 15'8 PMG: **h **m								Puesta de Sol		Salida de Luna		Puesta de Luna		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	12.7	-1	33.3	0	00.9	+5	59.9	60 N	17	45	18	26	19	15	17	19	
1	197	12.9		34.3	14	32.9	+6	15.6	58	45	24	10	25	7	7	03	96	
2	212	13.1		35.3	29	04.8		31.3	56	46	23	06	30	11	6	59	93	
3	227	13.3		36.2	43	36.7	+6	46.9	54	46	22	03	35	14	55	90		
4	242	13.5		37.2	58	08.5	+7	02.6	52	47	20	19 00	39	17	52	86		
5	257	13.7	-1	38.2	72	40.3	+7	18.2	50	17	47	18 19	18 57	17	43	19	6	
6	272	13.9	-1	39.2	87	11.9	+7	33.8	45	17	48	18 17	18 52	17	52	24	6	
7	287	14.2		40.1	101	43.6	+7	49.4	40	49	16	47	17 59	29	38	73		
8	302	14.4		41.1	116	15.1	+8	05.0	35	50	15	44	18 05	33	33	69		
9	317	14.6		42.1	130	46.6		20.5	30	50	14	42	10	36	29	66		
10	332	14.8		43.0	145	18.1		36.0	20	52	14	39	20	42	23	59		
11	347	15.0	-1	44.0	159	49.5	+8	51.5	10 N	17	53	18	14	18 38	18	28	47	
12	2	15.2	-1	45.0	174	20.8	+9	06.9	0	17	54	18	15	18 39	18	36	51	
13	17	15.4		46.0	188	52.0		22.3	10 S	56	17	41	44	56	05	45		
14	32	15.6		46.9	203	23.2		37.7	20	57	19	45	18	53	61	6	00	
15	47	15.9		47.9	217	54.3	+9	53.0	30	17	59	23	51	19	02	68	5	
16	62	16.1		48.9	232	25.3	+10	08.3	35	18	00	25	18	55	08	71	49	
17	77	16.3	-1	49.9	246	56.3	+10	23.6	40	18	01	18	29	19	00	19	15	
18	92	16.5	-1	50.8	261	27.2	+10	38.8	45	18	03	18	32	19	07	19	23	
19	107	16.7		51.8	275	58.0	+10	54.0	50	05	37	16	32	85	34	17		
20	122	16.9		52.8	290	28.7	+11	09.1	52	06	40	20	36	88	31	15		
21	137	17.1		53.7	304	59.4		24.2	54	07	42	25	41	91	28	12		
22	152	17.3		54.7	319	30.0		39.2	56	08	45	30	46	95	25	9		
23	167	17.6		55.7	334	00.5	+11	54.2	58	09	49	37	52	100	21	6		
24	182	17.8	-1	56.7	348	30.9	+12	09.2	60 S	18	10	18	52	19	44	19	59	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 32.9 ^m		Mag: -4.8 PMG: 13 ^h 47 ^m			Mag: +1.2 PMG: 7 ^h 43 ^m			Mag: -1.9 PMG: 9 ^h 02 ^m			Mag: +0.4 PMG: 0 ^h 25 ^m						
	hG ♈	hG ♎	Dec		hG ♂	Dec		hG ♏	Dec		hG ♊	Dec		hG ♋	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	5	48.1	152	42.8	-20	23.4	244	05.8	+21	12.8	224	19.3	+15	43.6	353	48.6		
1	20	50.6	167	44.8		23.8	259	06.7		12.6	239	21.3		43.5	8	51.2		
2	35	53.1	182	46.8		24.3	274	07.6		12.3	254	23.3		43.3	23	53.9		
3	50	55.5	197	48.8		24.7	289	08.5		12.0	269	25.3		43.2	38	56.5		
4	65	58.0	212	50.8		25.1	304	09.4		11.8	284	27.3		43.1	53	59.2		
5	81	00.4	227	52.8	-20	25.6	319	10.3	+21	11.5	299	29.3	+15	42.9	69	01.8		
6	96	02.9	242	54.8	-20	26.0	334	11.2	+21	11.2	314	31.3	+15	42.8	84	04.5		
7	111	05.4	257	56.8		26.4	349	12.1		11.0	329	33.3		42.6	99	07.1		
8	126	07.8	272	58.8		26.9	4	13.0		10.7	344	35.3		42.5	114	09.7		
9	141	10.3	288	00.8		27.3	19	13.9		10.4	359	37.3		42.4	129	12.4		
10	156	12.8	303	02.9		27.7	34	14.8		10.2	14	39.3		42.2	144	15.0		
11	171	15.2	318	04.9	-20	28.2	49	15.8	+21	09.9	29	41.4	+15	42.1	159	17.7		
12	186	17.7	333	06.9	-20	28.6	64	16.7	+21	09.6	44	43.4	+15	42.0	174	20.3		
13	201	20.2	348	08.9		29.0	79	17.6		09.4	59	45.4		41.8	189	22.9		
14	216	22.6	3	11.0		29.4	94	18.5		09.1	74	47.4		41.7	204	25.6		
15	231	25.1	18	13.0		29.8	109	19.4		08.8	89	49.4		41.5	219	28.2		
16	246	27.6	33	15.0		30.3	124	20.3		08.5	104	51.4		41.4	234	30.9		
17	261	30.0	48	17.1	-20	30.7	139	21.2	+21	08.3	119	53.4	+15	41.3	249	33.5		
18	276	32.5	63	19.1	-20	31.1	154	22.1	+21	08.0	134	55.4	+15	41.1	264	36.2		
19	291	34.9	78	21.2		31.5	169	23.0		07.7	149	57.4		41.0	279	38.8		
20	306	37.4	93	23.2		31.9	184	24.0		07.5	164	59.4		40.9	294	41.4		
21	321	39.9	108	25.3		32.3	199	24.9		07.2	180	01.4		40.7	309	44.1		
22	336	42.3	123	27.3		32.7	214	25.8		06.9	195	03.5		40.6	324	46.7		
23	351	44.8	138	29.4		33.1	229	26.7		06.6	210	05.5		40.4	339	49.4		
24	6	47.3	153	31.5	-20	33.5	244	27.6	+21	06.4	225	07.5	+15	40.3	354	52.0		
Dif	—		+20		-4		+9		-3		+20		-1		+26		-	

UT	SOL		LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 50.6 ^m		Edad: 16.9 ^d SD: 15'9 PMG: 0 ^h 48 ^m						PHE { 4 ^h : 58'6 12 ^h : 58'7 20 ^h : 58'8 R°: 50 ^m			Hora R°		Hora R°	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora R°		Hora R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	17.8	-1	56.7	348	30.9	+12	09.2	60 N	4 28	5 17	5 58	17 21	3	8 47
1	197	18.0		57.6	3	01.3 ¹¹⁴		24.0 ¹⁴⁸	58	32	18	58	31 9		38 100
2	212	18.2		58.6	17	31.5 ¹¹²		38.9 ¹⁴⁹	56	36	20	57	40 13		30 95
3	227	18.4	-1	59.6	32	01.7 ¹¹²	+12	53.7 ¹⁴⁸	54	40	21	56	47 17		23 92
4	242	18.6	-2	00.5	46	31.8 ¹¹¹	+13	08.4 ¹⁴⁷	52	43	22	56	17 55 20		17 88
5	257	18.8	-2	01.5	61	01.8 ¹¹⁰	+13	23.0 ¹⁴⁶	50	4 45	5 23	5 55	18 01 23	8 11	85
6	272	19.0	-2	02.5	75	31.8 ¹¹⁰	+13	37.6 ¹⁴⁶	45	4 51	5 25	5 54	18 15 29	7 59	79
7	287	19.2		03.5	90	01.6 ¹⁰⁸	+13	52.2 ¹⁴⁶	40	55	26	53	26 34		49 75
8	302	19.5		04.4	104	31.4 ¹⁰⁸	+14	06.6 ¹⁴⁴	35	4 58	27	52	36 37		41 70
9	317	19.7		05.4	119	01.0 ¹⁰⁶		21.0 ¹⁴⁴	30	5 00	28	52	18 45 40	33	67
10	332	19.9		06.4	133	30.6 ¹⁰⁶		35.4 ¹⁴⁴	20	03	28	50	19 00 45	21	61
11	347	20.1	-2	07.4	148	00.1 ¹⁰⁵	+14	49.6 ¹⁴²	10 N	5 03	5 28	5 49	19 13 50	7 10	56
12	2	20.3	-2	08.3	162	29.5 ¹⁰⁴	+15	03.8 ¹⁴²	0	5 03	5 27	5 47	19 26 54	6 59	52
13	17	20.5		09.3	176	58.8 ¹⁰³		18.0 ¹⁴²	10 S	5 00	25	46	39 58		49 47
14	32	20.7		10.3	191	28.1 ¹⁰³		32.0 ¹⁴⁰	20	4 57	22	44	19 52 63	38	43
15	47	20.9		11.2	205	57.2 ¹⁰¹		46.0 ¹⁴⁰	30	50	18	42	20 08 69	26	37
16	62	21.1		12.2	220	26.2 ¹⁰⁰	+15	59.9 ¹³⁹	35	46	16	41	17 72		18 34
17	77	21.4	-2	13.2	234	55.2 ¹⁰⁰	+16	13.7 ¹³⁸	40	4 41	5 12	5 40	20 28 75	6 10	30
18	92	21.6	-2	14.2	249	24.0 ⁹⁸	+16	27.4 ¹³⁷	45	4 34	5 08	5 38	20 40 81	6 01	25
19	107	21.8		15.1	263	52.8 ⁹⁸		41.1 ¹³⁷	50	25	03	36	20 56 86	5 50	19
20	122	22.0		16.1	278	21.4 ⁹⁶	+16	54.6 ¹³⁵	52	21	5 01	35	21 03 89	44	18
21	137	22.2		17.1	292	50.0 ⁹⁶	+17	08.1 ¹³⁵	54	16	4 58	34	11 93		39 14
22	152	22.4		18.0	307	18.5 ⁹⁵		21.5 ¹³⁴	56	10	55	33	20 97		32 11
23	167	22.6		19.0	321	46.8 ⁹³		34.8 ¹³³	58	4 04	52	31	30 103	25	7
24	182	22.8	-2	20.0	336	15.1 ⁹³	+17	48.0 ¹³²	60 S	3 57	4 48	5 30	21 42 110	5 17	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 29.0 ^m		Mag: -4.8 PMG: 13 ^h 44 ^m		Mag: +1.1 PMG: 7 ^h 42 ^m		Mag: -1.9 PMG: 8 ^h 58 ^m		Mag: +0.4 PMG: 0 ^h 20 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	6	47.3	153	31.5	-20	33.5	244	27.6	+21	06.4
1	21	49.7	168	33.5		34.0	259	28.5		06.1
2	36	52.2	183	35.6		34.4	274	29.4		05.8
3	51	54.7	198	37.7		34.8	289	30.3		05.6
4	66	57.1	213	39.8		35.2	304	31.3		05.3
5	81	59.6	228	41.9	-20	35.6	319	32.2	+21	05.0
6	97	02.0	243	43.9	-20	35.9	334	33.1	+21	04.7
7	112	04.5	258	46.0		36.3	349	34.0		04.5
8	127	07.0	273	48.1		36.7	4	34.9		04.2
9	142	09.4	288	50.2		37.1	19	35.8		03.9
10	157	11.9	303	52.3		37.5	34	36.8		03.7
11	172	14.4	318	54.4	-20	37.9	49	37.7	+21	03.4
12	187	16.8	333	56.5	-20	38.3	64	38.6	+21	03.1
13	202	19.3	348	58.6		38.7	79	39.5		02.8
14	217	21.8	4	00.8		39.1	94	40.4		02.6
15	232	24.2	19	02.9		39.4	109	41.3		02.3
16	247	26.7	34	05.0		39.8	124	42.3		02.0
17	262	29.2	49	07.1	-20	40.2	139	43.2	+21	01.7
18	277	31.6	64	09.2	-20	40.6	154	44.1	+21	01.5
19	292	34.1	79	11.4		40.9	169	45.0		01.2
20	307	36.5	94	13.5		41.3	184	45.9		00.9
21	322	39.0	109	15.7		41.7	199	46.9		00.6
22	337	41.5	124	17.8		42.1	214	47.8		00.4
23	352	43.9	139	19.9		42.4	229	48.7	+21	00.1
24	7	46.4	154	22.1	-20	42.8	244	49.6	+20	59.8
Dif	—		+21		-4		+9		-3	
							+20		-1	
									+26	
										-1

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 50.3 ^m			Edad: 17.9 ^d SD: 16'0 PMG: 1 ^h 38 ^m PHE { 4 ^h : 59'0 12 ^h : 59'1 20 ^h : 59'1 Rº: 57 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	Rº	Hora	Rº			
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	h m	h m	h m	h m	h m				
0	182	22.8	-2	20.0	336	15.1	92	+17	48.0	131	60 N	17 39	18 20	19 09	17 24	10	10 33 111				
1	197	23.0		21.0	350	43.3	90	+18	01.1	130	58	40	19	05	40	17	18 104				
2	212	23.2		21.9	5	11.3	90		14.1	130	56	41	18	19 01	17 53	23	10 05 99				
3	227	23.4		22.9	19	39.3	90		27.1	130	54	41	17	18 58	18 04	27	9 55 99				
4	242	23.7		23.9	34	07.2	89		39.9	128	52	42	16	55	15	30	45 90				
5	257	23.9	-2	24.8	48	34.9	87	+18	52.6	127	50	17 43	18 15	18 53	18 24	33	9 36 88				
6	272	24.1	-2	25.8	63	02.6	87	+19	05.2	126	45	17 44	18 14	18 48	18 44	38	9 18 82				
7	287	24.3		26.8	77	30.2	86		17.7	125	40	46	13	44	19 00	42	9 04 77				
8	302	24.5		27.8	91	57.6	84		30.1	124	35	47	12	41	13	46	8 51 74				
9	317	24.7		28.7	106	25.0	84		42.4	123	30	48	12	40	25	48	40 71				
10	332	24.9		29.7	120	52.2	82	+19	54.6	122	20	50	12	37	19 45	53	22 66				
11	347	25.1	-2	30.7	135	19.4	82	+20	06.7	121	10 N	17 52	18 13	18 37	20 03	57	8 06 62				
12	2	25.3	-2	31.6	149	46.5	81	+20	18.6	119	0	17 54	18 14	18 38	20 20	60	7 51 58				
13	17	25.5		32.6	164	13.4	79		30.5	119	10 S	55	16	41	37	63	36 54				
14	32	25.7		33.6	178	40.3	79		42.2	117	20	17 58	20	45	20 55	67	21 49				
15	47	25.9		34.6	193	07.0	77	+20	53.8	116	30	18 00	24	52	21 17	71	7 03 44				
16	62	26.2		35.5	207	33.7	77	+21	05.3	115	35	02	27	18 57	29	74	6 52 42				
17	77	26.4	-2	36.5	222	00.2	75	+21	16.7	114	40	18 03	18 31	19 03	21 43	77	6 40 38				
18	92	26.6	-2	37.5	236	26.6	74	+21	27.9	112	45	18 05	18 35	19 10	22 01	81	6 26 34				
19	107	26.8		38.4	250	53.0	74		39.0	111	50	08	41	19	22	86	09 28				
20	122	27.0		39.4	265	19.2	72	+21	50.0	110	52	09	43	24	32	90	6 02 25				
21	137	27.2		40.4	279	45.4	72	+22	00.9	109	54	10	46	29	44	93	5 53 21				
22	152	27.4		41.4	294	11.4	70		11.6	107	56	12	49	35	22	98	43 17				
23	167	27.6		42.3	308	37.3	69		22.2	106	58	13	53	42	23 13	103	32 12				
24	182	27.8	-2	43.3	323	03.1	68	+22	32.7	105	60 S	18 15	18 57	19 49	23 32	113	5 19 6				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 23 ^h 25.1 ^m			Mag: -4.8 PMG: 13 ^h 41 ^m			Mag: +1.1 PMG: 7 ^h 40 ^m			Mag: -1.9 PMG: 8 ^h 55 ^m			Mag: +0.4 PMG: 0 ^h 16 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /						
0	7	46.4	154	22.1	-20	42.8	244	49.6	+20	59.8	225	55.8	+15	37.0	355	55.4	+2	08.7			
1	22	48.9	169	24.2		43.2	259	50.5		59.5	240	57.8		36.9	10	58.1		08.6			
2	37	51.3	184	26.4		43.5	274	51.5		59.3	255	59.8		36.8	26	00.7		08.5			
3	52	53.8	199	28.6		43.9	289	52.4		59.0	271	01.8		36.6	41	03.3		08.4			
4	67	56.3	214	30.7		44.2	304	53.3		58.7	286	03.8		36.5	56	06.0		08.3			
5	82	58.7	229	32.9	-20	44.6	319	54.2	+20	58.4	301	05.8	+15	36.4	71	08.6	+2	08.3			
6	98	01.2	244	35.1	-20	45.0	334	55.1	+20	58.1	316	07.9	+15	36.2	86	11.3	+2	08.2			
7	113	03.7	259	37.2		45.3	349	56.1		57.9	331	09.9		36.1	101	13.9		08.1			
8	128	06.1	274	39.4		45.7	4	57.0		57.6	346	11.9		35.9	116	16.6		08.0			
9	143	08.6	289	41.6		46.0	19	57.9		57.3	1	13.9		35.8	131	19.2		08.0			
10	158	11.0	304	43.8		46.4	34	58.8		57.0	16	15.9		35.7	146	21.8		07.9			
11	173	13.5	319	46.0	-20	46.7	49	59.8	+20	56.8	31	17.9	+15	35.5	161	24.5	+2	07.8			
12	188	16.0	334	48.2	-20	47.1	65	00.7	+20	56.5	46	19.9	+15	35.4	176	27.1	+2	07.7			
13	203	18.4	349	50.4		47.4	80	01.6		56.2	61	22.0		35.3	191	29.8		07.6			
14	218	20.9	4	52.6		47.7	95	02.5		55.9	76	24.0		35.1	206	32.4		07.6			
15	233	23.4	19	54.8		48.1	110	03.5		55.6	91	26.0		35.0	221	35.1		07.5			
16	248	25.8	34	57.0		48.4	125	04.4		55.4	106	28.0		34.9	236	37.7		07.4			
17	263	28.3	49	59.2	-20	48.8	140	05.3	+20	55.1	121	30.0	+15	34.7	251	40.3	+2	07.3			
18	278	30.8	65	01.4	-20	49.1	155	06.2	+20	54.8	136	32.0	+15	34.6	266	43.0	+2	07.3			
19	293	33.2	80	03.6		49.4	170	07.2		54.5	151	34.1		34.5	281	45.6		07.2			
20	308	35.7	95	05.8		49.8	185	08.1		54.3	166	36.1		34.3	296	48.3		07.1			
21	323	38.1	110	08.0		50.1	200	09.0		54.0	181	38.1		34.2	311	50.9		07.0			
22	338	40.6	125	10.3		50.4	215	09.9		53.7	196	40.1		34.0	326	53.6		06.9			
23	353	43.1	140	12.5		50.7	230	10.9		53.4	211	42.1		33.9	341	56.2		06.9			
24	8	45.5	155	14.7	-20	51.1	245	11.8	+20	53.1	226	44.1	+15	33.8	356	58.9	+2	06.8			
Dif	—			+22			-3			+9			-3			+26			-1		

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'0 PMG:11 ^h 50.0 ^m			Edad: 18.9 ^d SD: 16'1 PMG: 2 ^h 34 ^m PHE 4^h: 59'2 12^h: 59'3 20^h: 59'3 R°: 59^m																			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora	R°	Hora	R°								
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m						
0	182	27.8	-2	43.3	323	03.1	68	+22	32.7	103	4	33	5	21	6	03	17	33	21	12	23	106	
1	197	28.0		44.3	337	28.9	66		43.0	102	37		23	02	17	55	31	12	01	96			
2	212	28.2		45.2	351	54.5	65	+22	53.2	100	40		24	01	18	14	36	11	42	91			
3	227	28.4		46.2	6	20.0	65	+23	03.2	99	43		25	6	00	30	40	27	87				
4	242	28.6		47.2	20	45.5	65		13.1	99	46		25	5	59	44	42	14	84				
5	257	28.8	-2	48.1	35	10.8	63	+23	22.9	98	4	48	5	26	5	58	18	56	44	11	02	82	
6	272	29.0	-2	49.1	49	36.0	62	+23	32.5	96	4	53	5	27	5	57	19	21	48	10	38	78	
7	287	29.3		50.1	64	01.2	62		42.0	95	57		28	55	41	51		19	74				
8	302	29.5		51.1	78	26.2	60	+23	51.3	93	4	59	29	54	19	57	54	10	03	72			
9	317	29.7		52.0	92	51.2	60	+24	00.5	92	5	01	29	53	20	12	55	9	50	69			
10	332	29.9		53.0	107	16.0	58		09.5	90	03		29	51	37	57		26	66				
11	347	30.1	-2	54.0	121	40.8	58	+24	18.4	89	5	03	5	28	5	49	20	58	60	9	06	63	
12	2	30.3	-2	54.9	136	05.4	56	+24	27.1	87	5	02	5	26	5	47	21	19	61	8	47	61	
13	17	30.5		55.9	150	30.0	55		35.6	85	4	59	24	45	21	39	63	29	57				
14	32	30.7		56.9	164	54.5	54		44.0	84	55		20	42	22	01	65	8	09	54			
15	47	30.9		57.8	179	18.9	53	+24	52.3	83	48		16	40	26	68	7	46	51				
16	62	31.1		58.8	193	43.2	52	+25	00.4	81	43		13	38	41	70		32	49				
17	77	31.3	-2	59.8	208	07.4	52	+25	08.3	79	4	37	5	09	5	36	22	59	71	7	17	46	
18	92	31.5	-3	00.8	222	31.5	51	+25	16.0	77	4	30	5	05	5	34	23	20	74	6	59	42	
19	107	31.7		01.7	236	55.6	49		23.6	76	20		4	59	31	23	47	77	36	37			
20	122	31.9		02.7	251	19.5	49		31.1	75	16		56	30	**	**	**		25	35			
21	137	32.1		03.7	265	43.4	49		38.3	72	10		53	29	**	**	**		6	13	31		
22	152	32.3		04.6	280	07.2	48		45.4	69	4	05	50	27	**	**	**		5	59	27		
23	167	32.5		05.6	294	30.9	47		52.3	68	3	58	46	26	**	**	**		43	21			
24	182	32.7	-3	06.6	308	54.6	47	+25	59.1	68	3	50	4	42	5	24	**	**	**	5	23	12	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 23 ^h 21.1 ^m		Mag: -4.8 PMG: 13 ^h 37 ^m			Mag: +1.1 PMG: 7 ^h 39 ^m			Mag: -1.9 PMG: 8 ^h 52 ^m			Mag: +0.3 PMG: 0 ^h 12 ^m							
	hG ♂		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	8	45.5	155	14.7	-20	51.1	245	11.8	+20	53.1	226	44.1	+15	33.8	356	58.9	+2	06.8	
1	23	48.0	170	17.0		51.4	260	12.7		52.9	241	46.2		33.6	12	01.5		06.7	
2	38	50.5	185	19.2		51.7	275	13.6		52.6	256	48.2		33.5	27	04.1		06.6	
3	53	52.9	200	21.5		52.0	290	14.6		52.3	271	50.2		33.4	42	06.8		06.6	
4	68	55.4	215	23.7		52.3	305	15.5		52.0	286	52.2		33.2	57	09.4		06.5	
5	83	57.9	230	26.0	-20	52.7	320	16.4	+20	51.7	301	54.2	+15	33.1	72	12.1	+2	06.4	
6	99	00.3	245	28.2	-20	53.0	335	17.4	+20	51.5	316	56.2	+15	33.0	87	14.7	+2	06.3	
7	114	02.8	260	30.5		53.3	350	18.3		51.2	331	58.3		32.8	102	17.4		06.2	
8	129	05.3	275	32.7		53.6	5	19.2		50.9	347	00.3		32.7	117	20.0		06.2	
9	144	07.7	290	35.0		53.9	20	20.2		50.6	2	02.3		32.6	132	22.6		06.1	
10	159	10.2	305	37.3		54.2	35	21.1		50.3	17	04.3		32.4	147	25.3		06.0	
11	174	12.6	320	39.6	-20	54.5	50	22.0	+20	50.0	32	06.3	+15	32.3	162	27.9	+2	05.9	
12	189	15.1	335	41.8	-20	54.8	65	22.9	+20	49.8	47	08.4	+15	32.2	177	30.6	+2	05.9	
13	204	17.6	350	44.1		55.1	80	23.9		49.5	62	10.4		32.0	192	33.2		05.8	
14	219	20.0	5	46.4		55.4	95	24.8		49.2	77	12.4		31.9	207	35.9		05.7	
15	234	22.5	20	48.7		55.7	110	25.7		48.9	92	14.4		31.7	222	38.5		05.6	
16	249	25.0	35	51.0		56.0	125	26.7		48.6	107	16.4		31.6	237	41.1		05.5	
17	264	27.4	50	53.3	-20	56.3	140	27.6	+20	48.4	122	18.5	+15	31.5	252	43.8	+2	05.5	
18	279	29.9	65	55.6	-20	56.6	155	28.5	+20	48.1	137	20.5	+15	31.3	267	46.4	+2	05.4	
19	294	32.4	80	57.9		56.9	170	29.5		47.8	152	22.5		31.2	282	49.1		05.3	
20	309	34.8	96	00.2		57.2	185	30.4		47.5	167	24.5		31.1	297	51.7		05.2	
21	324	37.3	111	02.5		57.5	200	31.3		47.2	182	26.5		30.9	312	54.4		05.2	
22	339	39.8	126	04.8		57.8	215	32.3		46.9	197	28.6		30.8	327	57.0		05.1	
23	354	42.2	141	07.1		58.0	230	33.2		46.7	212	30.6		30.7	342	59.7		05.0	
24	9	44.7	156	09.5	-20	58.3	245	34.1	+20	46.4	227	32.6	+15	30.5	358	02.3	+2	04.9	
Dif	—		+23		-3		+9		-3		+20		-1		+26			-1	

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG:11 ^h 49.7 ^m			Edad: 19.9 ^d SD: 16'2 PMG: 3 ^h 33 ^m PHE { 4 ^h : 59'3 12 ^h : 59'4 20 ^h : 59'4 R°: 64 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	32.7	-3	06.6	308	54.6	45	+25	59.1	60 N	17 33	18 14	19 03	17 54	56	14 09	79
1	197	32.9		07.5	323	18.1	45	+26	05.6	58	34	13	18 59	18 26	59	13 37	76
2	212	33.1		08.5	337	41.6	44		12.0	56	35	12	56	18 50	60	13 13	74
3	227	33.3		09.5	352	05.0	44		18.3	54	37	12	53	19 10	61	12 54	73
4	242	33.5		10.5	6	28.4	44		24.3	52	38	11	50	26	62	38	72
5	257	33.7	-3	11.4	20	51.7	43	+26	30.2	50	17 39	18 11	18 48	19 40	62	12 24	71
6	272	34.0	-3	12.4	35	14.9	42	+26	35.9	45	17 41	18 10	18 44	20 09	63	11 56	69
7	287	34.2		13.4	49	38.0	41		41.4	40	43	09	41	32	63	33	69
8	302	34.4		14.3	64	01.1	41		46.7	35	44	09	39	20 51	63	11 15	68
9	317	34.6		15.3	78	24.1	40		51.9	30	46	09	37	21 07	64	10 59	67
10	332	34.8		16.3	92	47.1	40	+26	56.8	20	48	10	36	34	65	32	66
11	347	35.0	-3	17.2	107	10.0	39	+27	01.6	10 N	17 51	18 12	18 36	21 58	64	10 09	65
12	2	35.2	-3	18.2	121	32.9	39	+27	06.2	0	17 53	18 14	18 38	22 20	65	9 48	64
13	17	35.4		19.2	135	55.7	38		10.6	10 S	55	16	41	22 42	65	26	63
14	32	35.6		20.1	150	18.4	37		14.9	20	17 58	20	46	23 06	65	9 03	62
15	47	35.8		21.1	164	41.1	37		18.9	30	18 01	25	53	34	65	8 37	60
16	62	36.0		22.1	179	03.8	37		22.7	35	03	29	18 58	23 51	64	21	59
17	77	36.2	-3	23.0	193	26.4	36	+27	26.4	40	18 05	18 33	19 05	** ** *	**	8 03	58
18	92	36.4	-3	24.0	207	48.9	35	+27	29.9	45	18 08	18 38	19 13	** ** *	**	7 41	56
19	107	36.6		25.0	222	11.5	36		33.2	50	11	44	23	** ** *	**	13	54
20	122	36.8		26.0	236	33.9	34		36.3	52	12	47	28	0 00	80	7 00	52
21	137	37.0		26.9	250	56.4	35		39.2	54	14	50	33	15	82	6 44	51
22	152	37.2		27.9	265	18.8	34		41.9	56	16	54	39	33	85	26	48
23	167	37.4		28.9	279	41.2	34		44.4	58	18	58	47	0 55	90	6 04	43
24	182	37.6	-3	29.8	294	03.6	34	+27	46.7	60 S	18 20	19 02	19 55	1 23	99	5 35	35

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 23 ^h 17.2 ^m		Mag: -4.8 PMG: 13 ^h 33 ^m		Mag: +1.1 PMG: 7 ^h 37 ^m		Mag: -1.9 PMG: 8 ^h 49 ^m		Mag: +0.3 PMG: 0 ^h 08 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	9	44.7	156	09.5	-20	58.3	245	34.1	+20	46.4	227	32.6	+15	30.5	358	02.3	+2	04.9
1	24	47.1	171	11.8		58.6	260	35.1		46.1	242	34.6		30.4	13	04.9		04.8
2	39	49.6	186	14.1		58.9	275	36.0		45.8	257	36.6		30.3	28	07.6		04.8
3	54	52.1	201	16.4		59.2	290	37.0		45.5	272	38.7		30.1	43	10.2		04.7
4	69	54.5	216	18.8		59.4	305	37.9		45.2	287	40.7		30.0	58	12.9		04.6
5	84	57.0	231	21.1	-20	59.7	320	38.8	+20	45.0	302	42.7	+15	29.9	73	15.5	+2	04.5
6	99	59.5	246	23.5	-21	00.0	335	39.8	+20	44.7	317	44.7	+15	29.7	88	18.2	+2	04.5
7	115	01.9	261	25.8	-21	00.2	350	40.7		44.4	332	46.7		29.6	103	20.8		04.4
8	130	04.4	276	28.2		00.5	5	41.6		44.1	347	48.8		29.5	118	23.4		04.3
9	145	06.9	291	30.5		00.8	20	42.6		43.8	2	50.8		29.3	133	26.1		04.2
10	160	09.3	306	32.9		01.0	35	43.5		43.5	17	52.8		29.2	148	28.7		04.1
11	175	11.8	321	35.2	-21	01.3	50	44.4	+20	43.2	32	54.8	+15	29.1	163	31.4	+2	04.1
12	190	14.3	336	37.6	-21	01.6	65	45.4	+20	43.0	47	56.9	+15	28.9	178	34.0	+2	04.0
13	205	16.7	351	40.0		01.8	80	46.3		42.7	62	58.9		28.8	193	36.7		03.9
14	220	19.2	6	42.4		02.1	95	47.3		42.4	78	00.9		28.7	208	39.3		03.8
15	235	21.6	21	44.7		02.3	110	48.2		42.1	93	02.9		28.5	223	42.0		03.8
16	250	24.1	36	47.1		02.6	125	49.1		41.8	108	05.0		28.4	238	44.6		03.7
17	265	26.6	51	49.5	-21	02.8	140	50.1	+20	41.5	123	07.0	+15	28.3	253	47.2	+2	03.6
18	280	29.0	66	51.9	-21	03.1	155	51.0	+20	41.2	138	09.0	+15	28.1	268	49.9	+2	03.5
19	295	31.5	81	54.3		03.3	170	52.0		41.0	153	11.0		28.0	283	52.5		03.5
20	310	34.0	96	56.7		03.6	185	52.9		40.7	168	13.0		27.9	298	55.2		03.4
21	325	36.4	111	59.1		03.8	200	53.8		40.4	183	15.1		27.7	313	57.8		03.3
22	340	38.9	127	01.5		04.0	215	54.8		40.1	198	17.1		27.6	329	00.5		03.2
23	355	41.4	142	03.9		04.3	230	55.7		39.8	213	19.1		27.5	344	03.1		03.1
24	10	43.8	157	06.3	-21	04.5	245	56.7	+20	39.5	228	21.1	+15	27.3	359	05.8	+2	03.1
Dif	—		+24		-3		+9		-3		+20		-1		+26		-1	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 49.3 ^m			Edad: 20.9 ^d SD: 16'2 PMG: 4 ^h 35 ^m PHE { 4 ^h : 59'4 12 ^h : 59'4 20 ^h : 59'3 R°: 63 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	182	37.6	-3	29.8	294	03.6	33	+27	46.7	21	4	38	5	26	6	08	18	48	94
1	197	37.8		30.8	308	25.9	34		48.8	20	41	27	06	19	23	86	14	51	44
2	212	38.0		31.8	322	48.3	33		50.8	17	44	28	05	19	49	82	26	47	
3	227	38.2		32.7	337	10.6	33		52.5	16	47	28	04	20	09	79	14	05	50
4	242	38.4		33.7	351	32.8	32		54.1	13	50	29	02	26	77	13	48	52	
5	257	38.6	-3	34.7	5	55.1	33	+27	55.4	12	4	52	5	29	6	01	20	41	75
6	272	38.8	-3	35.6	20	17.4	33	+27	56.6	10	4	56	5	30	5	59	21	11	72
7	287	39.0		36.6	34	39.6	32		57.6	7	4	59	30	57	34	70	12	41	57
8	302	39.2		37.6	49	01.8	32		58.3	6	5	01	30	55	21	53	69	21	59
9	317	39.4		38.5	63	24.1	33		58.9	4	02	30	54	22	09	68	12	05	59
10	332	39.6		39.5	77	46.3	32		59.3	3	04	29	51	22	37	65	11	37	60
11	347	39.8	-3	40.5	92	08.6	33	+27	59.5	2	5	03	5	28	5	49	23	01	63
12	2	40.0	-3	41.4	106	30.8	32	+27	59.5	0	5	01	5	25	5	46	23	23	62
13	17	40.2		42.4	120	53.0	32		59.2	3	4	58	22	43	23	45	60	28	63
14	32	40.4		43.4	135	15.3	33		58.8	4	20	53	19	41	**	**	**	10	04
15	47	40.6		44.3	149	37.6	33		58.2	6	30	45	13	37	**	**	**	9	36
16	62	40.8		45.3	163	59.8	32		57.5	7	35	40	10	35	**	**	**	9	19
17	77	41.0	-3	46.3	178	22.1	33	+27	56.5	10	40	4	34	5	06	5	33	0	10
18	92	41.2	-3	47.2	192	44.4	33	+27	55.3	12	45	4	26	5	01	5	30	0	34
19	107	41.4		48.2	207	06.8	34		53.9	14	50	16	4	54	27	1	04	61	8
20	122	41.6		49.2	221	29.1	33		52.4	15	52	11	51	26	19	61	7	51	69
21	137	41.8		50.1	235	51.5	34		50.6	18	54	4	05	48	24	36	61	33	70
22	152	42.0		51.1	250	13.9	34		48.6	20	56	3	59	44	22	1	57	60	7
23	167	42.1		52.1	264	36.4	35		46.5	21	58	51	40	20	2	23	59	6	46
24	182	42.3	-3	53.0	278	58.9	35	+27	44.2	23	60	3	43	4	35	5	18	3	00

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 23 ^h 13.3 ^m		Mag: -4.7 PMG: 13 ^h 29 ^m				Mag: +1.1 PMG: 7 ^h 36 ^m				Mag: -1.9 PMG: 8 ^h 45 ^m				Mag: +0.3 PMG: 0 ^h 04 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	10	43.8	157	06.3	-21	04.5	245	56.7	+20	39.5	228	21.1	+15	27.3	359	05.8	+2	03.1
1	25	46.3	172	08.7		04.8	260	57.6		39.2	243	23.2		27.2	14	08.4		03.0
2	40	48.7	187	11.1		05.0	275	58.6		38.9	258	25.2		27.0	29	11.0		02.9
3	55	51.2	202	13.6		05.2	290	59.5		38.7	273	27.2		26.9	44	13.7		02.8
4	70	53.7	217	16.0		05.5	306	00.4		38.4	288	29.2		26.8	59	16.3		02.8
5	85	56.1	232	18.4	-21	05.7	321	01.4	+20	38.1	303	31.3	+15	26.6	74	19.0	+2	02.7
6	100	58.6	247	20.8	-21	05.9	336	02.3	+20	37.8	318	33.3	+15	26.5	89	21.6	+2	02.6
7	116	01.1	262	23.3		06.1	351	03.3		37.5	333	35.3		26.4	104	24.3		02.5
8	131	03.5	277	25.7		06.4	6	04.2		37.2	348	37.3		26.2	119	26.9		02.4
9	146	06.0	292	28.2		06.6	21	05.2		36.9	3	39.4		26.1	134	29.5		02.4
10	161	08.5	307	30.6		06.8	36	06.1		36.6	18	41.4		26.0	149	32.2		02.3
11	176	10.9	322	33.1	-21	07.0	51	07.1	+20	36.3	33	43.4	+15	25.8	164	34.8	+2	02.2
12	191	13.4	337	35.5	-21	07.2	66	08.0	+20	36.1	48	45.5	+15	25.7	179	37.5	+2	02.1
13	206	15.9	352	38.0		07.4	81	09.0		35.8	63	47.5		25.6	194	40.1		02.1
14	221	18.3	7	40.4		07.6	96	09.9		35.5	78	49.5		25.4	209	42.8		02.0
15	236	20.8	22	42.9		07.9	111	10.8		35.2	93	51.5		25.3	224	45.4		01.9
16	251	23.2	37	45.4		08.1	126	11.8		34.9	108	53.6		25.2	239	48.1		01.8
17	266	25.7	52	47.9	-21	08.3	141	12.7	+20	34.6	123	55.6	+15	25.0	254	50.7	+2	01.7
18	281	28.2	67	50.3	-21	08.5	156	13.7	+20	34.3	138	57.6	+15	24.9	269	53.3	+2	01.7
19	296	30.6	82	52.8		08.7	171	14.6		34.0	153	59.6		24.8	284	56.0		01.6
20	311	33.1	97	55.3		08.9	186	15.6		33.7	169	01.7		24.6	299	58.6		01.5
21	326	35.6	112	57.8		09.1	201	16.5		33.4	184	03.7		24.5	315	01.3		01.4
22	341	38.0	128	00.3		09.3	216	17.5		33.2	199	05.7		24.4	330	03.9		01.4
23	356	40.5	143	02.8		09.4	231	18.4		32.9	214	07.8		24.3	345	06.6		01.3
24	11	43.0	158	05.3	-21	09.6	246	19.4	+20	32.6	229	09.8	+15	24.1	0	09.2	+2	01.2
Dif	—		+25		-2		+9		-3		+20		-1		-8974		-1	

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 11 ^h 49.0 ^m			Edad: 21.9 ^d SD: 16 ^h 2 PMG: 5 ^h 38 ^m PHE { 4 ^h : 59/3 12 ^h : 59/2 20 ^h : 59/2 R°: 62 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	182	42.3	-3	53.0	278	58.9	35	+27	44.2	17 27	18 08	18 56	20 22 110	16 03 16		
1	197	42.5		54.0	293	21.4	35		41.6	29	08	53	20 49 102	15 35 24		
2	212	42.7		55.0	307	43.9	35		38.9	30	07	50	21 11 95	15 13 30		
3	227	42.9		55.9	322	06.5	36		36.0	32	07	48	28 92	14 55 34		
4	242	43.1		56.9	336	29.2	37		32.9	33	07	46	43 88	40 37		
5	257	43.3	-3	57.9	350	51.9	37	+27	29.6	17 34	18 06	18 44	21 56 86	14 27 39		
6	272	43.5	-3	58.8	5	14.6	37	+27	26.2	17 37	18 06	18 40	22 23 80	13 59 44		
7	287	43.7	-3	59.8	19	37.4	38		22.5	39	06	38	22 44 76	38 47		
8	302	43.9	-4	00.8	34	00.2	38		18.7	41	07	36	23 02 73	20 50		
9	317	44.1		01.7	48	23.1	39		14.6	42	07	35	17 70	13 04 52		
10	332	44.3		02.7	62	46.1	40		10.4	46	08	34	23 42 67	12 37 56		
11	347	44.5	-4	03.7	77	09.1	40	+27	06.0	17 49	18 10	18 35	** ** *	12 14 59		
12	2	44.7	-4	04.6	91	32.1	40	+27	01.4	17 52	18 13	18 37	** ** *	11 53 61		
13	17	44.9		05.6	105	55.3	42	+26	56.7	55	16	41	** ** *	31 64		
14	32	45.1		06.6	120	18.4	41		51.7	17 59	21	46	0 09 59	11 08 67		
15	47	45.3		07.5	134	41.7	43		46.6	18 02	27	18 55	37 56	10 41 70		
16	62	45.5		08.5	149	05.0	43		41.3	18 05	30	19 00	0 53 55	25 72		
17	77	45.7	-4	09.5	163	28.4	44	+26	35.8	18 07	18 35	19 07	1 13 52	10 06 75		
18	92	45.9	-4	10.4	177	51.9	45	+26	30.2	18 10	18 40	19 15	1 36 50	9 43 78		
19	107	46.1		11.4	192	15.4	45		24.4	14	47	26	2 05 46	14 83		
20	122	46.3		12.4	206	39.1	47		18.4	16	50	31	20 44	9 00 85		
21	137	46.4		13.3	221	02.7	46		12.2	18	54	37	37 41	8 43 88		
22	152	46.6		14.3	235	26.5	48	+26	05.8	20	58	44	2 57 37	8 24 91		
23	167	46.8		15.2	249	50.4	49	+25	59.3	22	19 02	19 52	3 22 32	7 59 97		
24	182	47.0	-4	16.2	264	14.3	49	+25	52.6	18 25	19 08	20 01	3 56 22	7 25 108		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 23 ^h 09.3 ^m		Mag: -4.7 PMG: 13 ^h 25 ^m			Mag: +1.1 PMG: 7 ^h 34 ^m			Mag: -1.9 PMG: 8 ^h 42 ^m			Mag: +0.3 PMG: 23 ^h 55 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	11	43.0	158	05.3	-21	09.6	246	19.4	+20	32.6	229	09.8	+15	24.1		
1	26	45.4	173	07.8		09.8	261	20.3		32.3	244	11.8		24.0		
2	41	47.9	188	10.3		10.0	276	21.3		32.0	259	13.8		23.9		
3	56	50.4	203	12.8		10.2	291	22.2		31.7	274	15.9		23.7		
4	71	52.8	218	15.3		10.4	306	23.2		31.4	289	17.9		23.6		
5	86	55.3	233	17.9	-21	10.6	321	24.1	+20	31.1	304	19.9	+15	23.5		
6	101	57.7	248	20.4	-21	10.7	336	25.1	+20	30.8	319	22.0	+15	23.3		
7	117	00.2	263	22.9		10.9	351	26.0		30.5	334	24.0		23.2		
8	132	02.7	278	25.4		11.1	6	27.0		30.2	349	26.0		23.1		
9	147	05.1	293	28.0		11.3	21	27.9		29.9	4	28.0		22.9		
10	162	07.6	308	30.5		11.4	36	28.9		29.7	19	30.1		22.8		
11	177	10.1	323	33.1	-21	11.6	51	29.8	+20	29.4	34	32.1	+15	22.7		
12	192	12.5	338	35.6	-21	11.8	66	30.8	+20	29.1	49	34.1	+15	22.5		
13	207	15.0	353	38.1		11.9	81	31.8		28.8	64	36.2		22.4		
14	222	17.5	8	40.7		12.1	96	32.7		28.5	79	38.2		22.3		
15	237	19.9	23	43.3		12.3	111	33.7		28.2	94	40.2		22.1		
16	252	22.4	38	45.8		12.4	126	34.6		27.9	109	42.3		22.0		
17	267	24.9	53	48.4	-21	12.6	141	35.6	+20	27.6	124	44.3	+15	21.9		
18	282	27.3	68	51.0	-21	12.7	156	36.5	+20	27.3	139	46.3	+15	21.7		
19	297	29.8	83	53.5		12.9	171	37.5		27.0	154	48.3		21.6		
20	312	32.2	98	56.1		13.0	186	38.4		26.7	169	50.4		21.5		
21	327	34.7	113	58.7		13.2	201	39.4		26.4	184	52.4		21.3		
22	342	37.2	129	01.3		13.3	216	40.4		26.1	199	54.4		21.2		
23	357	39.6	144	03.9		13.5	231	41.3		25.8	214	56.5		21.1		
24	12	42.1	159	06.5	-21	13.6	246	42.3	+20	25.5	229	58.5	+15	20.9		
Dif	—		+25		-2		+10		-3		+20		-1		+26	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 48.7 ^m			Edad: 22.9 ^d SD: 16'1 PMG: 6 ^h 39 ^m						PHE { 4 ^h : 59'1 12 ^h : 59'1 20 ^h : 59'0 R°: 57 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	182	47.0	-4	16.2	264	14.3	50	+25	52.6	68	60 N	4 42	5 31	6 12	22 11 107	16 17 6
1	197	47.2		17.2	278	38.3	51		45.8	70	58	46	31	11	29 101	15 58 12
2	212	47.4		18.1	293	02.4	52		38.8	72	56	48	32	09	45 96	42 17
3	227	47.6		19.1	307	26.6	53		31.6	74	54	51	32	07	22 58 92	28 21
4	242	47.8		20.1	321	50.9	53		24.2	75	52	53	32	06	23 10 88	16 24
5	257	48.0	-4	21.0	336	15.2	53	+25	16.7	75	50	4 55	5 32	6 04	23 20 85	15 05 27
6	272	48.2	-4	22.0	350	39.7	55	+25	09.0	77	45	4 58	5 32	6 02	23 41 80	14 42 33
7	287	48.4		23.0	5	04.2	55	+25	01.2	78	40	5 01	32	5 59	23 59 74	24 37
8	302	48.6		23.9	19	28.8	56	+24	53.2	80	35	02	32	57	** ** *	14 08 41
9	317	48.8		24.9	33	53.6	58		45.1	81	30	03	31	55	** ** *	13 55 43
10	332	49.0		25.9	48	18.4	58		36.8	83	20	04	30	52	** ** *	32 48
11	347	49.1	-4	26.8	62	43.3	59	+24	28.3	85	10 N	5 03	5 27	5 48	0 04 62	13 12 52
12	2	49.3	-4	27.8	77	08.3	60	+24	19.7	86	0	5 01	5 25	5 45	0 25 58	12 53 56
13	17	49.5		28.7	91	33.4	61		11.0	87	10 S	4 57	21	42	0 45 55	34 60
14	32	49.7		29.7	105	58.6	62	+24	02.1	89	20	51	17	39	1 07 51	12 13 64
15	47	49.9		30.7	120	23.9	63	+23	53.0	91	30	43	11	35	32 47	11 50 68
16	62	50.1		31.6	134	49.3	64		43.8	92	35	37	07	32	1 47 44	36 71
17	77	50.3	-4	32.6	149	14.8	65	+23	34.5	93	40	4 30	5 02	5 30	2 04 41	11 19 75
18	92	50.5	-4	33.6	163	40.3	65	+23	25.0	95	45	4 22	4 57	5 27	2 24 37	11 00 79
19	107	50.7		34.5	178	06.0	67		15.4	96	50	11	50	23	2 50 32	10 35 85
20	122	50.9		35.5	192	31.8	68	+23	05.6	98	52	05	47	21	3 02 29	23 88
21	137	51.0		36.4	206	57.7	69	+22	55.7	99	54	4 00	43	19	16 26	10 10 91
22	152	51.2		37.4	221	23.7	70		45.7	100	56	3 53	39	17	33 21	9 54 96
23	167	51.4		38.4	235	49.8	71		35.5	102	58	45	34	14	3 52 16	35 102
24	182	51.6	-4	39.3	250	15.9	71	+22	25.2	103	60 S	3 36	4 29	5 12	4 17 7	9 11 110

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 23 ^h 05.4 ^m		Mag: -4.7 PMG: 13 ^h 21 ^m		Mag: +1.0 PMG: 7 ^h 33 ^m		Mag: -1.9 PMG: 8 ^h 39 ^m		Mag: +0.3 PMG: 23 ^h 51 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	12	42.1	159	06.5	-21	13.6	246	42.3	+20	25.5
1	27	44.6	174	09.1		13.8	261	43.2		25.2
2	42	47.0	189	11.7		13.9	276	44.2		25.0
3	57	49.5	204	14.3		14.0	291	45.1		24.7
4	72	52.0	219	16.9		14.2	306	46.1		24.4
5	87	54.4	234	19.5	-21	14.3	321	47.1	+20	24.1
6	102	56.9	249	22.1	-21	14.4	336	48.0	+20	23.8
7	117	59.4	264	24.7		14.6	351	49.0		23.5
8	133	01.8	279	27.3		14.7	6	49.9		23.2
9	148	04.3	294	30.0		14.8	21	50.9		22.9
10	163	06.7	309	32.6		14.9	36	51.9		22.6
11	178	09.2	324	35.2	-21	15.0	51	52.8	+20	22.3
12	193	11.7	339	37.9	-21	15.2	66	53.8	+20	22.0
13	208	14.1	354	40.5		15.3	81	54.7		21.7
14	223	16.6	9	43.2		15.4	96	55.7		21.4
15	238	19.1	24	45.8		15.5	111	56.7		21.1
16	253	21.5	39	48.5		15.6	126	57.6		20.8
17	268	24.0	54	51.1	-21	15.7	141	58.6	+20	20.5
18	283	26.5	69	53.8	-21	15.8	156	59.6	+20	20.2
19	298	28.9	84	56.4		15.9	172	00.5		19.9
20	313	31.4	99	59.1		16.0	187	01.5		19.6
21	328	33.8	115	01.8		16.1	202	02.4		19.3
22	343	36.3	130	04.5		16.2	217	03.4		19.0
23	358	38.8	145	07.1		16.3	232	04.4		18.7
24	13	41.2	160	09.8	-21	16.4	247	05.3	+20	18.4
Dif	—		+26		-1		+10		-3	

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 48.4 ^m			Edad: 23.9 ^d SD: 16'1 PMG: 7 ^h 36 ^m PHE { 4 ^h : 58'9 12 ^h : 58'8 20 ^h : 58'7 R°: 54 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /	° /		° /		°	h m	h m	h m	h m m	h m m	h m m		
0	182 51.6	-4 39.3	250 15.9	73	+22	25.2	105	60 N	17 21	18 02	18 50	23 58 **		16 23 4		
1	197 51.8	40.3	264 42.2	74		14.7		58	23	02	47	** ** *		16 10 8		
2	212 52.0	41.3	279 08.6	75	+22	04.2	105	56	25	02	45	** ** *		15 59 12		
3	227 52.2	42.2	293 35.1	76	+21	53.5	107	54	27	02	43	** ** *		49 16		
4	242 52.4	43.2	308 01.7	77		42.7	108	52	28	02	41	** ** *		40 19		
5	257 52.6	-4 44.1	322 28.4	78	+21	31.7	110	50	17 30	18 02	18 39	** ** *		15 32 21		
6	272 52.8	-4 45.1	336 55.2	79	+21	20.6	111	45	17 33	18 03	18 36	** ** *		15 15 27		
7	287 52.9	46.1	351 22.1	80	+21	09.4	112	40	36	03	34	** ** *		15 01 31		
8	302 53.1	47.0	5 49.1	81	+20	58.1	113	35	39	04	33	0 13 72		14 49 35		
9	317 53.3	48.0	20 16.2	82		46.7	114	30	41	05	32	26 69		38 39		
10	332 53.5	49.0	34 43.4	83		35.2	115	20	45	07	32	0 47 64		20 44		
11	347 53.7	-4 49.9	49 10.7	84	+20	23.5	117	10 N	17 48	18 09	18 34	1 06 59		14 04 49		
12	2 53.9	-4 50.9	63 38.1	85	+20	11.7	118	0	17 52	18 12	18 37	1 23 55		13 49 53		
13	17 54.1	51.8	78 05.6	86	+19	59.8	119	10 S	55	16	41	40 51		34 57		
14	32 54.3	52.8	92 33.2	87		47.8	120	20	17 59	21	47	1 58 46		13 17 63		
15	47 54.4	53.8	107 00.9	88		35.7	121	30	18 04	28	18 56	2 19 41		12 58 68		
16	62 54.6	54.7	121 28.7	89		23.5	122	35	06	32	19 02	31 38		47 71		
17	77 54.8	-4 55.7	135 56.6	90	+19	11.2	123	40	18 09	18 37	19 09	2 45 34		12 34 76		
18	92 55.0	-4 56.6	150 24.6	91	+18	58.8	124	45	18 13	18 43	19 18	3 01 31		12 19 80		
19	107 55.2	57.6	164 52.7	92		46.3	125	50	17	50	30	22 24		12 00 86		
20	122 55.4	58.6	179 20.9	93		33.7	126	52	19	54	35	31 22		11 51 89		
21	137 55.6	-4 59.5	193 49.2	94		20.9	128	54	21	18 58	42	42 18		41 93		
22	152 55.7	-5 00.5	208 17.6	95	+18	08.1	128	56	24	19 02	49	3 54 15		30 96		
23	167 55.9	01.4	222 46.0	96	+17	55.2	129	58	27	07	19 57	4 08 10		17 101		
24	182 56.1	-5 02.4	237 14.6		+17	42.2	130	60 S	18 30	19 13	20 07	4 24 5		11 01 107		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 23 ^h 01.5 ^m		Mag: -4.7 PMG: 13 ^h 17 ^m		Mag: +1.0 PMG: 7 ^h 31 ^m		Mag: -1.9 PMG: 8 ^h 36 ^m		Mag: +0.3 PMG: 23 ^h 47 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /						
0	13 41.2	160 09.8	-21 16.4	247 05.3	+20 18.4	230 47.3	+15 17.8	2 16.2	+1 57.5							
1	28 43.7	175 12.5	16.5	262 06.3	18.1	245 49.4	17.7	17 18.8	57.4							
2	43 46.2	190 15.2	16.6	277 07.3	17.8	260 51.4	17.5	32 21.5	57.3							
3	58 48.6	205 17.9	16.7	292 08.2	17.5	275 53.4	17.4	47 24.1	57.3							
4	73 51.1	220 20.6	16.8	307 09.2	17.2	290 55.5	17.3	62 26.7	57.2							
5	88 53.6	235 23.3	-21 16.8	322 10.2	+20 16.9	305 57.5	+15 17.1	77 29.4	+1 57.1							
6	103 56.0	250 26.0	-21 16.9	337 11.1	+20 16.6	320 59.5	+15 17.0	92 32.0	+1 57.0							
7	118 58.5	265 28.7	17.0	352 12.1	16.3	336 01.6	16.9	107 34.7	56.9							
8	134 01.0	280 31.4	17.1	7 13.1	16.0	351 03.6	16.7	122 37.3	56.9							
9	149 03.4	295 34.2	17.1	22 14.0	15.7	6 05.7	16.6	137 40.0	56.8							
10	164 05.9	310 36.9	17.2	37 15.0	15.4	21 07.7	16.5	152 42.6	56.7							
11	179 08.3	325 39.6	-21 17.3	52 16.0	+20 15.1	36 09.7	+15 16.3	167 45.3	+1 56.6							
12	194 10.8	340 42.3	-21 17.3	67 16.9	+20 14.8	51 11.8	+15 16.2	182 47.9	+1 56.6							
13	209 13.3	355 45.1	17.4	82 17.9	14.5	66 13.8	16.1	197 50.5	56.5							
14	224 15.7	10 47.8	17.5	97 18.9	14.2	81 15.8	16.0	212 53.2	56.4							
15	239 18.2	25 50.6	17.5	112 19.9	13.9	96 17.9	15.8	227 55.8	56.3							
16	254 20.7	40 53.3	17.6	127 20.8	13.6	111 19.9	15.7	242 58.5	56.3							
17	269 23.1	55 56.1	-21 17.6	142 21.8	+20 13.3	126 22.0	+15 15.6	258 01.1	+1 56.2							
18	284 25.6	70 58.8	-21 17.7	157 22.8	+20 13.0	141 24.0	+15 15.4	273 03.8	+1 56.1							
19	299 28.1	86 01.6	17.8	172 23.7	12.7	156 26.0	15.3	288 06.4	56.0							
20	314 30.5	101 04.3	17.8	187 24.7	12.4	171 28.1	15.2	303 09.1	55.9							
21	329 33.0	116 07.1	17.9	202 25.7	12.1	186 30.1	15.0	318 11.7	55.9							
22	344 35.5	131 09.9	17.9	217 26.7	11.8	201 32.2	14.9	333 14.3	55.8							
23	359 37.9	146 12.6	17.9	232 27.6	11.5	216 34.2	14.8	348 17.0	55.7							
24	14 40.4	161 15.4	-21 18.0	247 28.6	+20 11.2	231 36.2	+15 14.7	3 19.6	+1 55.6							
Dif	—	+27	-1	+10	-3	+20	-1	+26	-1							

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 48.1 ^m			Edad: 24.9 ^d SD: 16'0 PMG: 8 ^h 29 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	182	56.1	-5	02.4	237	14.6	97	+17	42.2	131	60 N	4 47	5 36	6 17	**	**	**	16 25 1
1	197	56.3		03.4	251	43.3	98		29.1	131	58	50	36	15	0	10	97	17 5
2	212	56.5		04.3	266	12.1	98		16.0	131	56	53	36	13	21	92	10 8	
3	227	56.7		05.3	280	40.9	98	+17	02.7	133	54	55	36	11	30	89	16 03 1	
4	242	56.9		06.2	295	09.9	100	+16	49.3	134	52	56	35	09	38	86	15 57 14	
5	257	57.0	-5	07.2	309	38.9	100	+16	35.9	134	50	4 58	5 35	6 08	0 45	83	15 52 16	
6	272	57.2	-5	08.2	324	08.1	102	+16	22.4	135	45	5 01	5 35	6 04	1 01	77	15 41 21	
7	287	57.4		09.1	338	37.3	102	+16	08.8	136	40	03	34	6 01	13	73	31 26	
8	302	57.6		10.1	353	06.6	103	+15	55.1	137	35	04	33	5 59	24	68	23 29	
9	317	57.8		11.0	7	36.0	104		41.3	138	30	05	32	56	33	65	15 33	
10	332	58.0		12.0	22	05.5	105		27.5	138	20	04	30	52	1 49	60	15 02 39	
11	347	58.1	-5	13.0	36	35.1	106	+15	13.5	140	10 N	5 03	5 27	5 48	2 03	55	14 51 44	
12	2	58.3	-5	13.9	51	04.7	106	+14	59.6	139	0	5 00	5 24	5 45	2 16	50	14 40 49	
13	17	58.5		14.9	65	34.5	108		45.5	141	10 S	4 56	20	41	29	46	30 53	
14	32	58.7		15.8	80	04.3	108		31.4	141	20	49	15	37	43	40	18 58	
15	47	58.9		16.8	94	34.2	109		17.2	142	30	40	08	32	2 59	34	14 05 64	
16	62	59.1		17.7	109	04.2	110	+14	02.9	143	35	34	5 04	30	3 08	31	13 57 67	
17	77	59.2	-5	18.7	123	34.3	111	+13	48.6	143	40	4 27	4 59	5 27	3 18	28	13 48 71	
18	92	59.4	-5	19.7	138	04.5	112	+13	34.2	144	45	4 18	4 53	5 23	3 30	23	13 38 76	
19	107	59.6		20.6	152	34.7	112		19.7	145	50	06	46	18	45	17	25 82	
20	122	59.8		21.6	167	05.0	113	+13	05.2	145	52	4 00	42	16	51	16	19 84	
21	138	00.0		22.5	181	35.4	114	+12	50.6	146	54	3 54	38	14	3 59	12	12 88	
22	153	00.1		23.5	196	05.9	115		36.0	146	56	47	33	12	4 07	9	13 05 91	
23	168	00.3		24.5	210	36.5	116		21.3	147	58	38	28	09	16	6	12 57 94	
24	183	00.5	-5	25.4	225	07.1	116	+12	06.5	148	60 S	3 29	4 23	5 06	4 27	1	12 47 99	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 57.5 ^m		Mag: -4.7 PMG: 13 ^h 13 ^m			Mag: +1.0 PMG: 7 ^h 30 ^m			Mag: -1.9 PMG: 8 ^h 32 ^m			Mag: +0.3 PMG: 23 ^h 43 ^m						
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	14	40.4	161	15.4	-21	18.0	247	28.6	+20	11.2	231	36.2	+15	14.7	3	19.6	+1	55.6
1	29	42.8	176	18.2		18.0	262	29.6		10.9	246	38.3		14.5	18	22.3		55.6
2	44	45.3	191	21.0		18.1	277	30.5		10.6	261	40.3		14.4	33	24.9		55.5
3	59	47.8	206	23.8		18.1	292	31.5		10.3	276	42.4		14.3	48	27.6		55.4
4	74	50.2	221	26.6		18.1	307	32.5		10.0	291	44.4		14.1	63	30.2		55.3
5	89	52.7	236	29.3	-21	18.1	322	33.5	+20	09.7	306	46.4	+15	14.0	78	32.9	+1	55.2
6	104	55.2	251	32.1	-21	18.2	337	34.4	+20	09.4	321	48.5	+15	13.9	93	35.5	+1	55.2
7	119	57.6	266	35.0		18.2	352	35.4		09.1	336	50.5		13.7	108	38.2		55.1
8	135	00.1	281	37.8		18.2	7	36.4		08.8	351	52.6		13.6	123	40.8		55.0
9	150	02.6	296	40.6		18.2	22	37.4		08.5	6	54.6		13.5	138	43.4		54.9
10	165	05.0	311	43.4		18.3	37	38.3		08.2	21	56.6		13.4	153	46.1		54.9
11	180	07.5	326	46.2	-21	18.3	52	39.3	+20	07.9	36	58.7	+15	13.2	168	48.7	+1	54.8
12	195	10.0	341	49.0	-21	18.3	67	40.3	+20	07.6	52	00.7	+15	13.1	183	51.4	+1	54.7
13	210	12.4	356	51.9		18.3	82	41.3		07.3	67	02.8		13.0	198	54.0		54.6
14	225	14.9	11	54.7		18.3	97	42.2		07.0	82	04.8		12.8	213	56.7		54.6
15	240	17.3	26	57.5		18.3	112	43.2		06.7	97	06.9		12.7	228	59.3		54.5
16	255	19.8	42	00.4		18.3	127	44.2		06.4	112	08.9		12.6	244	02.0		54.4
17	270	22.3	57	03.2	-21	18.3	142	45.2	+20	06.1	127	10.9	+15	12.4	259	04.6	+1	54.3
18	285	24.7	72	06.0	-21	18.3	157	46.2	+20	05.8	142	13.0	+15	12.3	274	07.2	+1	54.2
19	300	27.2	87	08.9		18.3	172	47.1		05.5	157	15.0		12.2	289	09.9		54.2
20	315	29.7	102	11.7		18.3	187	48.1		05.2	172	17.1		12.1	304	12.5		54.1
21	330	32.1	117	14.6		18.3	202	49.1		04.9	187	19.1		11.9	319	15.2		54.0
22	345	34.6	132	17.5		18.3	217	50.1		04.6	202	21.2		11.8	334	17.8		53.9
23	0	37.1	147	20.3		18.3	232	51.1		04.3	217	23.2		11.7	349	20.5		53.9
24	15	39.5	162	23.2	-21	18.3	247	52.0	+20	04.0	232	25.2	+15	11.5	4	23.1	+1	53.8
Dif	—		+28		0		+10		-3		+20		-1		+26		-	

UT	SOL			LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 47.8 ^m			Edad: 25.9 ^d SD: 15'9 PMG: 9 ^h 18 ^m PHE { 4 ^h : 58'3 12 ^h : 58'1 20 ^h : 58'0 R°: 47 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	183	00.5	-5	25.4	225	07.1	+12	06.5	60 N	17	15	17	56	18	44	16	26
1	198	00.7		26.4	239	37.8	+11	51.7	58	17		57	42	47	94	22	5
2	213	00.9		27.3	254	08.6		36.9	56	20		57	40	53	90	18	8
3	228	01.0		28.3	268	39.4		22.0	54	22		57	38	1	59	87	14
4	243	01.2		29.2	283	10.3	+11	07.0	52	24		58	37	2	04	84	11
5	258	01.4	-5	30.2	297	41.3	+10	52.0	50	17	26	17	58	18	35	2	08
6	273	01.6	-5	31.1	312	12.3	+10	37.0	45	17	30	17	59	18	33	2	18
7	288	01.8		32.1	326	43.4		21.9	40	33		18	00	31	26	71	15
8	303	01.9		33.1	341	14.6	+10	06.7	35	36		01	30	32	68	52	29
9	318	02.1		34.0	355	45.9	+9	51.5	30	38		02	30	38	64	48	32
10	333	02.3		35.0	10	17.2		36.3	20	43		05	31	49	58	41	38
11	348	02.5	-5	35.9	24	48.5	+9	21.1	10 N	17	47	18	08	18	33	2	58
12	3	02.7	-5	36.9	39	20.0	+9	05.8	0	17	51	18	12	18	36	3	06
13	18	02.8		37.8	53	51.5	+8	50.5	10 S	17	55	16	41	15	43	23	52
14	33	03.0		38.8	68	23.0		35.1	20	18	00	22	48	23	39	16	57
15	48	03.2		39.8	82	54.6		19.7	30	05		29	18	57	33	33	09
16	63	03.4		40.7	97	26.3	+8	04.3	35	08		34	19	04	39	30	15
17	78	03.6	-5	41.7	111	58.0	+7	48.8	40	18	11	18	39	19	11	3	46
18	93	03.7	-5	42.6	126	29.8	+7	33.3	45	18	15	18	45	19	21	3	53
19	108	03.9		43.6	141	01.6		17.8	50	20		53	33	4	02	17	47
20	123	04.1		44.5	155	33.5	+7	02.3	52	23		18	57	39	07	14	43
21	138	04.3		45.5	170	05.4	+6	46.7	54	25		19	02	46	11	12	40
22	153	04.4		46.4	184	37.4		31.2	56	28		06	19	54	16	9	36
23	168	04.6		47.4	199	09.4	+6	15.6	58	31		12	20	03	22	5	31
24	183	04.8	-5	48.3	213	41.5	+5	59.9	60 S	18	35	19	18	20	13	4	28
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 22 ^h 53.6 ^m		Mag: -4.6 PMG: 13 ^h 08 ^m			Mag: +1.0 PMG: 7 ^h 28 ^m			Mag: -1.9 PMG: 8 ^h 29 ^m			Mag: +0.3 PMG: 23 ^h 38 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	15	39.5	162	23.2	-21	18.3	247	52.0	+20	04.0	232	25.2	+15	11.5			
1	30	42.0	177	26.1		18.3	262	53.0		03.7	247	27.3		11.4			
2	45	44.4	192	28.9		18.3	277	54.0		03.4	262	29.3		11.3			
3	60	46.9	207	31.8		18.2	292	55.0		03.0	277	31.4		11.2			
4	75	49.4	222	34.7		18.2	307	56.0		02.7	292	33.4		11.0			
5	90	51.8	237	37.6	-21	18.2	322	56.9	+20	02.4	307	35.5	+15	10.9			
6	105	54.3	252	40.5	-21	18.2	337	57.9	+20	02.1	322	37.5	+15	10.8			
7	120	56.8	267	43.4		18.1	352	58.9		01.8	337	39.6		10.6			
8	135	59.2	282	46.3		18.1	7	59.9		01.5	352	41.6		10.5			
9	151	01.7	297	49.2		18.1	23	00.9		01.2	7	43.6		10.4			
10	166	04.2	312	52.1		18.0	38	01.9		00.9	22	45.7		10.3			
11	181	06.6	327	55.0	-21	18.0	53	02.8	+20	00.6	37	47.7	+15	10.1			
12	196	09.1	342	57.9	-21	18.0	68	03.8	+20	00.3	52	49.8	+15	10.0			
13	211	11.6	358	00.8		17.9	83	04.8	+20	00.0	67	51.8		09.9			
14	226	14.0	13	03.8		17.9	98	05.8	+19	59.7	82	53.9		09.7			
15	241	16.5	28	06.7		17.8	113	06.8		59.4	97	55.9		09.6			
16	256	18.9	43	09.6		17.8	128	07.8		59.1	112	58.0		09.5			
17	271	21.4	58	12.6	-21	17.7	143	08.8	+19	58.8	128	00.0	+15	09.4			
18	286	23.9	73	15.5	-21	17.7	158	09.7	+19	58.5	143	02.1	+15	09.2			
19	301	26.3	88	18.4		17.6	173	10.7		58.2	158	04.1		09.1			
20	316	28.8	103	21.4		17.6	188	11.7		57.8	173	06.2		09.0			
21	331	31.3	118	24.3		17.5	203	12.7		57.5	188	08.2		08.8			
22	346	33.7	133	27.3		17.4	218	13.7		57.2	203	10.3		08.7			
23	1	36.2	148	30.2		17.4	233	14.7		56.9	218	12.3		08.6			
24	16	38.7	163	33.2	-21	17.3	248	15.7	+19	56.6	233	14.3	+15	08.5			
Dif	—		+29		0		+10		-3		+20		-1		+26		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16 ^h 0 PMG: 11 ^h 47.5 ^m			Edad: 26.9 ^d SD: 15 ^h 8 PMG: 10 ^h 04 ^m														
	hG ☉	Dec		hG ☾	Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	183	04.8	-5	48.3	213	41.5	+5	59.9	156	60 N	4	52	5	40	6	22		
1	198	05.0		49.3	228	13.6		44.3	157	58	55	40	19	19	90	25	4	
2	213	05.2		50.3	242	45.8		28.6	157	56	57	40	17	22	86	25	6	
3	228	05.3		51.2	257	18.0	+5	12.9	157	54	4	58	39	15	24	83	24	
4	243	05.5		52.2	271	50.2	+4	57.3	156	52	5	00	39	13	26	81	23	
5	258	05.7	-5	53.1	286	22.5	+4	41.6	157	50	5	01	5	38	3	28	78	
6	273	05.9	-5	54.1	300	54.9	+4	25.8	158	45	5	03	5	37	3	32	73	
7	288	06.0		55.0	315	27.2	+4	10.1	157	40	05	36	03	36	68	20	23	
8	303	06.2		56.0	329	59.6	+3	54.4	157	35	05	35	6	00	38	65	19	
9	318	06.4		56.9	344	32.1		38.6	157	30	06	33	5	57	41	61	19	
10	333	06.6		57.9	359	04.6		22.9	158	20	05	31	53	45	55	17	35	
11	348	06.7	-5	58.8	13	37.1	+3	07.1	158	10 N	5	03	5	27	5	48	16	
12	3	06.9	-5	59.8	28	09.6	+2	51.4	157	0	4	59	5	23	3	53	45	
13	18	07.1	-6	00.7	42	42.2		35.6	158	10 S	54	19	40	3	57	40	13	
14	33	07.3		01.7	57	14.8		19.8	158	20	47	13	35	4	00	36	12	
15	48	07.4		02.6	71	47.5	+2	04.1	157	30	38	06	30	05	30	10	61	
16	63	07.6		03.6	86	20.1	+1	48.3	158	35	31	5	01	27	07	27	09	
17	78	07.8	-6	04.6	100	52.8	+1	32.5	158	40	4	23	4	56	5	23	16	
18	93	07.9	-6	05.5	115	25.6	+1	16.8	157	45	4	14	4	49	5	19	16	
19	108	08.1		06.5	129	58.3	+1	01.0	158	50	4	01	41	14	17	14	06	
20	123	08.3		07.4	144	31.1	+0	45.3	157	52	3	55	37	12	19	12	05	
21	138	08.5		08.4	159	03.9		29.5	158	54	48	33	09	21	9	04	82	
22	153	08.6		09.3	173	36.7	+0	13.8	157	56	41	28	06	23	7	03	85	
23	168	08.8		10.3	188	09.5	-0	01.9	157	58	32	22	03	26	3	02	89	
24	183	09.0	-6	11.2	202	42.4	-0	17.7	158	60 S	3	21	4	16	5	00	16	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 22 ^h 49.7 ^m			Mag: -4.6 PMG: 13 ^h 03 ^m			Mag: +1.0 PMG: 7 ^h 26 ^m			Mag: -1.9 PMG: 8 ^h 26 ^m			Mag: +0.3 PMG: 23 ^h 34 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	16	38.7	163	33.2	-21	17.3	248	15.7	+19	56.6	233	14.3	+15	08.5	5	26.6		
1	31	41.1	178	36.2		17.2	263	16.7		56.3	248	16.4		08.3	20	29.2		
2	46	43.6	193	39.1		17.1	278	17.6		56.0	263	18.4		08.2	35	31.9		
3	61	46.0	208	42.1		17.1	293	18.6		55.7	278	20.5		08.1	50	34.5		
4	76	48.5	223	45.1		17.0	308	19.6		55.4	293	22.5		07.9	65	37.2		
5	91	51.0	238	48.1	-21	16.9	323	20.6	+19	55.1	308	24.6	+15	07.8	80	39.8		
6	106	53.4	253	51.0	-21	16.8	338	21.6	+19	54.8	323	26.6	+15	07.7	95	42.5		
7	121	55.9	268	54.0		16.8	353	22.6		54.5	338	28.7		07.6	110	45.1		
8	136	58.4	283	57.0		16.7	8	23.6		54.2	353	30.7		07.4	125	47.7		
9	152	00.8	299	00.0		16.6	23	24.6		53.8	8	32.8		07.3	140	50.4		
10	167	03.3	314	03.0		16.5	38	25.6		53.5	23	34.8		07.2	155	53.0		
11	182	05.8	329	06.0	-21	16.4	53	26.6	+19	53.2	38	36.9	+15	07.1	170	55.7		
12	197	08.2	344	09.0	-21	16.3	68	27.6	+19	52.9	53	38.9	+15	06.9	185	58.3		
13	212	10.7	359	12.0		16.2	83	28.6		52.6	68	41.0		06.8	201	01.0		
14	227	13.2	14	15.0		16.1	98	29.5		52.3	83	43.0		06.7	216	03.6		
15	242	15.6	29	18.0		16.0	113	30.5		52.0	98	45.1		06.5	231	06.3		
16	257	18.1	44	21.1		15.9	128	31.5		51.7	113	47.1		06.4	246	08.9		
17	272	20.5	59	24.1	-21	15.8	143	32.5	+19	51.4	128	49.2	+15	06.3	261	11.5		
18	287	23.0	74	27.1	-21	15.7	158	33.5	+19	51.1	143	51.2	+15	06.2	276	14.2		
19	302	25.5	89	30.2		15.6	173	34.5		50.8	158	53.3		06.0	291	16.8		
20	317	27.9	104	33.2		15.4	188	35.5		50.4	173	55.3		05.9	306	19.5		
21	332	30.4	119	36.2		15.3	203	36.5		50.1	188	57.4		05.8	321	22.1		
22	347	32.9	134	39.3		15.2	218	37.5		49.8	203	59.5		05.7	336	24.8		
23	2	35.3	149	42.3		15.1	233	38.5		49.5	219	01.5		05.5	351	27.4		
24	17	37.8	164	45.4	-21	15.0	248	39.5	+19	49.2	234	03.6	+15	05.4	6	30.1		
Dif	—			+30	+1		+10	-3		+21	-1		+26	-1				

UT	SOL		● LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0 PMG: 11 ^h 47.3 ^m		Edad: 27.9 ^d PHE { 4 ^h : 57/4 12 ^h : 57/2 20 ^h : 57/0 PMG: 10 ^h 49 ^m R°: 46 ^m						Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	183 09.0	-6 11.2	202 42.4	139	-0 17.7	157	60 N	17 09	17 50	18 38	4 50	93	16 26	2	
1	198 09.2	12.2	217 15.3	139	33.4	156	58	12	51	36	49 89	29 5			
2	213 09.3	13.1	231 48.2	139	-0 49.0	156	56	15	52	35	48 86	31 8			
3	228 09.5	14.1	246 21.1	139	-1 04.7	157	54	17	52	33	47 83	33 1			
4	243 09.7	15.0	260 54.0	139	20.4	157	52	19	53	32	47 80	35 13			
5	258 09.8	-6 16.0	275 26.9	139	-1 36.0	156	50	17 21	17 54	18 31	4 46	78	16 36	16	
6	273 10.0	-6 16.9	289 59.9	140	-1 51.6	156	45	17 26	17 55	18 29	4 45	72	16 40	21	
7	288 10.2	17.9	304 32.9	140	-2 07.2	156	40	30	57	28	44 68	43 25			
8	303 10.3	18.8	319 05.8	139	22.8	156	35	33	17 58	28	43 64	46 28			
9	318 10.5	19.8	333 38.8	140	38.4	156	30	36	18 00	28	42 61	48 31			
10	333 10.7	20.7	348 11.8	140	-2 53.9	155	20	41	03	29	40 56	52 37			
11	348 10.9	-6 21.7	2 44.8	140	-3 09.4	155	10 N	17 46	18 07	18 32	4 39	51	16 56	41	
12	3 11.0	-6 22.6	17 17.8	140	-3 24.9	155	0	17 51	18 11	18 36	4 38	46	16 59	46	
13	18 11.2	23.6	31 50.8	140	40.4	155	10 S	17 55	16	41	37 41	17 03	50		
14	33 11.4	24.5	46 23.8	140	-3 55.8	154	20	18 00	22	48	36 36	06 56			
15	48 11.5	25.5	60 56.9	141	-4 11.2	154	30	06	30	18 59	35 31	11 61			
16	63 11.7	26.4	75 29.9	140	26.6	154	35	10	35	19 06	34 28	13 64			
17	78 11.9	-6 27.4	90 02.9	140	-4 41.9	153	40	18 13	18 41	19 14	4 33	24	17 16	68	
18	93 12.0	-6 28.3	104 35.9	140	-4 57.2	153	45	18 18	18 48	19 24	4 32	20	17 19	72	
19	108 12.2	29.3	119 08.9	140	-5 12.5	153	50	24	18 57	37	31 15	23 77			
20	123 12.4	30.2	133 42.0	141	27.8	153	52	26	19 01	43	31 12	24 81			
21	138 12.5	31.2	148 15.0	140	43.0	152	54	29	06	51	30 10	26 83			
22	153 12.7	32.1	162 48.0	140	-5 58.1	151	56	32	11	19 59	30 7	28 87			
23	168 12.9	33.0	177 21.0	140	-6 13.3	152	58	36	17	20 08	29 5	31 89			
24	183 13.1	-6 34.0	191 54.0	140	-6 28.4	151	60 S	18 39	19 23	20 19	4 28	1	17 34	93	
UT	ARIES PMG 22 ^h 45.7 ^m		VENUS Mag: -4.6 PMG: 12 ^h 58 ^m		MARTE Mag: +1.0 PMG: 7 ^h 25 ^m		JÚPITER Mag: -1.9 PMG: 8 ^h 23 ^m		SATURNO Mag: +0.4 PMG: 23 ^h 30 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /					
0	17 37.8	164 45.4	-21 15.0	248 39.5	+19 49.2	234 03.6	+15 05.4	6 30.1	+1 50.1	50.1					
1	32 40.3	179 48.4	14.8	263 40.5	48.9	249 05.6	05.3	21 32.7	50.0	50.0					
2	47 42.7	194 51.5	14.7	278 41.5	48.6	264 07.7	05.1	36 35.3	49.9	49.9					
3	62 45.2	209 54.5	14.6	293 42.5	48.3	279 09.7	05.0	51 38.0	49.8	49.8					
4	77 47.6	224 57.6	14.4	308 43.5	48.0	294 11.8	04.9	66 40.6	49.7	49.7					
5	92 50.1	240 00.7	-21 14.3	323 44.5	+19 47.6	309 13.8	+15 04.8	81 43.3	+1 49.7	49.7					
6	107 52.6	255 03.7	-21 14.2	338 45.5	+19 47.3	324 15.9	+15 04.6	96 45.9	+1 49.7	49.7					
7	122 55.0	270 06.8	14.0	353 46.5	47.0	339 17.9	04.5	111 48.6	49.6	49.6					
8	137 57.5	285 09.9	13.9	8 47.5	46.7	354 20.0	04.4	126 51.2	49.5	49.5					
9	153 00.0	300 13.0	13.7	23 48.5	46.4	9 22.0	04.3	141 53.8	49.4	49.4					
10	168 02.4	315 16.1	13.6	38 49.5	46.1	24 24.1	04.1	156 56.5	49.4	49.4					
11	183 04.9	330 19.2	-21 13.4	53 50.5	+19 45.8	39 26.1	+15 04.0	171 59.1	+1 49.3	49.3					
12	198 07.4	345 22.3	-21 13.3	68 51.5	+19 45.5	54 28.2	+15 03.9	187 01.8	+1 49.2	49.2					
13	213 09.8	0 25.4	13.1	83 52.5	45.2	69 30.2	03.8	202 04.4	49.1	49.1					
14	228 12.3	15 28.5	13.0	98 53.5	44.8	84 32.3	03.6	217 07.1	49.1	49.1					
15	243 14.8	30 31.6	12.8	113 54.5	44.5	99 34.4	03.5	232 09.7	49.0	49.0					
16	258 17.2	45 34.7	12.6	128 55.5	44.2	114 36.4	03.4	247 12.4	48.9	48.9					
17	273 19.7	60 37.8	-21 12.5	143 56.5	+19 43.9	129 38.5	+15 03.2	262 15.0	+1 48.8	48.8					
18	288 22.1	75 40.9	-21 12.3	158 57.5	+19 43.6	144 40.5	+15 03.1	277 17.6	+1 48.8	48.8					
19	303 24.6	90 44.0	12.1	173 58.5	43.3	159 42.6	03.0	292 20.3	48.7	48.7					
20	318 27.1	105 47.1	12.0	188 59.5	43.0	174 44.6	02.9	307 22.9	48.6	48.6					
21	333 29.5	120 50.3	11.8	204 00.5	42.7	189 46.7	02.7	322 25.6	48.5	48.5					
22	348 32.0	135 53.4	11.6	219 01.5	42.3	204 48.7	02.6	337 28.2	48.5	48.5					
23	3 34.5	150 56.5	11.4	234 02.5	42.0	219 50.8	02.5	352 30.9	48.4	48.4					
24	18 36.9	165 59.7	-21 11.2	249 03.5	+19 41.7	234 52.9	+15 02.4	7 33.5	+1 48.3	48.3					
Dif	—	+31	+2	+10	-3	+21	-1	+26	-1	-1					

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16 ^h 0 PMG: 11 ^h 47.0 ^m			Edad: 28.9 ^d SD: 15 ^h 5 PMG: 11 ^h 33 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°						
h	°	′	°	′	°	′	°	h	m	h	m	h	m	h	m	m					
0	183	13.1	−6	34.0	191	54.0	−6	28.4	60 N	4	57	5	45	6	22	92	16	26	1		
1	198	13.2		34.9	206	27.0		43.4	58	4	59		44	24	17	88	32		5		
2	213	13.4		35.9	221	00.0	−6	58.4	56	5	01		44	21	13	84	37		9		
3	228	13.6		36.8	235	33.0	−7	13.4	54		02		43	18	09	82	42		1		
4	243	13.7		37.8	250	05.9		28.3	52		03		42	16	06	78	47		13		
5	258	13.9	−6	38.7	264	38.9	−7	43.2	50	5	04	5	41	6	03	76	16	51	16		
6	273	14.0	−6	39.7	279	11.8	−7	58.0	45	5	06	5	40	6	09	5	56	71	16	59	21
7	288	14.2		40.6	293	44.8	−8	12.8	40		07		38	05	50	67	17	06	25		
8	303	14.4		41.6	308	17.7		27.6	35		07		36	6	02	46	63	13	28		
9	318	14.5		42.5	322	50.6		42.3	30		07		35	5	59	42	59	18	32		
10	333	14.7		43.5	337	23.5	−8	56.9	20		06		31	53	34	55	28	36			
11	348	14.9	−6	44.4	351	56.4	−9	11.5	10 N	5	03	5	27	5	48	5	28	50	17	36	41
12	3	15.0	−6	45.4	6	29.2	−9	26.0	0	4	59	5	23	5	44	5	23	45	17	44	46
13	18	15.2		46.3	21	02.1		40.5	10 S		53		18	39	17	40	17	52	50		
14	33	15.4		47.2	35	34.9	−9	55.0	20		46		12	34	11	36	18	00	55		
15	48	15.5		48.2	50	07.7	−10	09.3	30		35	5	04	28	04	31	10	60			
16	63	15.7		49.1	64	40.5		23.7	35		28	4	59	24	5	00	28	16	63		
17	78	15.9	−6	50.1	79	13.2	−10	37.9	40	4	20	4	53	5	20	4	56	24	18	22	67
18	93	16.0	−6	51.0	93	46.0	−10	52.1	45	4	10	4	46	5	16	4	51	20	18	30	71
19	108	16.2		52.0	108	18.7	−11	06.3	50	3	56		37	10	45	15		39	76		
20	123	16.4		52.9	122	51.4		20.3	52		50		32	07	42	13	43	79			
21	138	16.5		53.9	137	24.1		34.4	54		43		28	04	39	10	48	82			
22	153	16.7		54.8	151	56.7	−11	48.3	56		35		23	5	01	36	7	53	85		
23	168	16.8		55.7	166	29.3	−12	02.2	58		25		17	4	58	32	4	18	59	89	
24	183	17.0	−6	56.7	181	01.9	−12	16.0	60 S	3	14	4	10	4	54	4	28	1	19	06	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 22 ^h 41.8 ^m		Mag: −4.5 PMG: 12 ^h 53 ^m		Mag: +1.0 PMG: 7 ^h 23 ^m		Mag: −1.9 PMG: 8 ^h 19 ^m		Mag: +0.4 PMG: 23 ^h 26 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	′	°	′	°	′	°	′	°	′								
0	18	36.9	165	59.7	−21	11.2	249	03.5	+19	41.7	234	52.9	+15	02.4	7	33.5	+1	48.3
1	33	39.4	181	02.8		11.1	264	04.5		41.4	249	54.9		02.2	22	36.2		48.2
2	48	41.9	196	06.0		10.9	279	05.5		41.1	264	57.0		02.1	37	38.8		48.2
3	63	44.3	211	09.1		10.7	294	06.5		40.8	279	59.0		02.0	52	41.4		48.1
4	78	46.8	226	12.3		10.5	309	07.5		40.5	295	01.1		01.9	67	44.1		48.0
5	93	49.2	241	15.4	−21	10.3	324	08.5	+19	40.2	310	03.1	+15	01.7	82	46.7	+1	47.9
6	108	51.7	256	18.6	−21	10.1	339	09.5	+19	39.8	325	05.2	+15	01.6	97	49.4	+1	47.8
7	123	54.2	271	21.8		09.9	354	10.6		39.5	340	07.3		01.5	112	52.0		47.8
8	138	56.6	286	24.9		09.7	9	11.6		39.2	355	09.3		01.4	127	54.7		47.7
9	153	59.1	301	28.1		09.5	24	12.6		38.9	10	11.4		01.2	142	57.3		47.6
10	169	01.6	316	31.3		09.3	39	13.6		38.6	25	13.4		01.1	157	59.9		47.5
11	184	04.0	331	34.4	−21	09.1	54	14.6	+19	38.3	40	15.5	+15	01.0	173	02.6	+1	47.5
12	199	06.5	346	37.6	−21	08.9	69	15.6	+19	38.0	55	17.6	+15	00.9	188	05.2	+1	47.4
13	214	09.0	1	40.8		08.6	84	16.6		37.6	70	19.6		00.7	203	07.9		47.3
14	229	11.4	16	44.0		08.4	99	17.6		37.3	85	21.7		00.6	218	10.5		47.2
15	244	13.9	31	47.2		08.2	114	18.6		37.0	100	23.7		00.5	233	13.2		47.2
16	259	16.4	46	50.4		08.0	129	19.6		36.7	115	25.8		00.4	248	15.8		47.1
17	274	18.8	61	53.6	−21	07.8	144	20.6	+19	36.4	130	27.8	+15	00.2	263	18.5	+1	47.0
18	289	21.3	76	56.8	−21	07.5	159	21.7	+19	36.1	145	29.9	+15	00.1	278	21.1	+1	46.9
19	304	23.7	92	00.0		07.3	174	22.7		35.7	160	32.0	+15	00.0	293	23.7		46.9
20	319	26.2	107	03.2		07.1	189	23.7		35.4	175	34.0	+14	59.9	308	26.4		46.8
21	334	28.7	122	06.4		06.8	204	24.7		35.1	190	36.1		59.7	323	29.0		46.7
22	349	31.1	137	09.6		06.6	219	25.7		34.8	205	38.1		59.6	338	31.7		46.6
23	4	33.6	152	12.9		06.4	234	26.7		34.5	220	40.2		59.5	353	34.3		46.6
24	19	36.1	167	16.1	−21	06.1	249	27.7	+19	34.2	235	42.3	+14	59.4	8	37.0	+1	46.5

Dif	—	+32	+2	+10	−3	+21	−1	+26	−	−4
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UT	SOL			● LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 46.7 ^m			Edad: 29.9 ^d SD: 15'4 PMG: 12 ^h 19 ^m PHE { 4 ^h : 56'3 12 ^h : 56'1 20 ^h : 55'9 R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Civil			Náutico	Hora	R°	Hora	R°	
h	° /	° /	° /	° /		° /		°	h m	h m	h m	h m m	h m m	h m m		
0	183 17.0	-6 56.7	181 01.9	136	-12	16.0	138	60 N	17 03	17 45	18 33	7 54 96	16 27 4			
1	198 17.2	57.6	195 34.5	135		29.8	137	58	06	46	31	45 91	37 8			
2	213 17.3	58.6	210 07.0	135		43.5	136	56	10	47	30	37 87	46 12			
3	228 17.5	-6 59.5	224 39.5	135	-12	57.1	136	54	12	48	29	31 83	16 53 16			
4	243 17.7	-7 00.5	239 12.0	135	-13	10.7	136	52	15	49	28	24 80	17 00 19			
5	258 17.8	-7 01.4	253 44.5	135	-13	24.2	135	50	17 17	17 50	18 27	7 19 77	17 07 20			
6	273 18.0	-7 02.3	268 16.9	134	-13	37.6	134	45	17 22	17 52	18 26	7 07 72	17 20 26			
7	288 18.1	03.3	282 49.3	134	-13	51.0	134	40	27	54	25	6 57 68	31 30			
8	303 18.3	04.2	297 21.6	133	-14	04.2	132	35	30	56	25	49 64	41 33			
9	318 18.5	05.2	311 53.9	133		17.4	132	30	34	17 58	26	41 62	17 50 36			
10	333 18.6	06.1	326 26.2	133		30.6	132	20	40	18 02	27	29 56	18 04 41			
11	348 18.8	-7 07.1	340 58.5	133	-14	43.6	130	10 N	17 45	18 06	18 31	6 18 52	18 17 45			
12	3 18.9	-7 08.0	355 30.7	132	-14	56.6	130	0	17 50	18 11	18 35	6 08 47	18 30 48			
13	18 19.1	08.9	10 02.9	132	-15	09.5	129	10 S	17 55	16	41	5 57 44	42 52			
14	33 19.3	09.9	24 35.0	131		22.3	128	20	18 01	23	18 49	47 39	18 55 56			
15	48 19.4	10.8	39 07.1	131		35.0	127	30	07	32	19 00	35 34	19 10 61			
16	63 19.6	11.8	53 39.2	131	-15	47.7	127	35	11	37	07	28 31	19 64			
17	78 19.7	-7 12.7	68 11.2	130	-16	00.3	126	40	18 16	18 43	19 16	5 20 28	19 29 68			
18	93 19.9	-7 13.7	82 43.2	130	-16	12.8	125	45	18 21	18 51	19 27	5 11 24	19 41 71			
19	108 20.0	14.6	97 15.2	130		25.2	124	50	27	19 00	41	5 00 19	19 55 77			
20	123 20.2	15.5	111 47.1	129		37.5	123	52	30	05	48	4 55 16	20 02 80			
21	138 20.4	16.5	126 19.0	129	-16	49.7	122	54	33	10	19 55	49 14	10 82			
22	153 20.5	17.4	140 50.9	129	-17	01.9	122	56	36	15	20 04	43 11	18 86			
23	168 20.7	18.4	155 22.7	128		14.0	121	58	40	22	14	36 7	28 90			
24	183 20.8	-7 19.3	169 54.4	127	-17	25.9	119	60 S	18 44	19 29	20 26	4 29 2	20 39 96			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 22 ^h 37.9 ^m		Mag: -4.5 PMG: 12 ^h 48 ^m			Mag: +1.0 PMG: 7 ^h 22 ^m			Mag: -1.9 PMG: 8 ^h 16 ^m			Mag: +0.4 PMG: 23 ^h 21 ^m				
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♏	Dec	hG ♏	Dec	hG ♏	Dec	hG ♏	Dec			
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /			
0	19 36.1	167 16.1	-21 06.1	249 27.7	+19 34.2	235 42.3	+14 59.4	8 37.0	+1 46.5							
1	34 38.5	182 19.3	05.9	264 28.7	33.9	250 44.3	59.2	23 39.6	46.4							
2	49 41.0	197 22.5	05.6	279 29.8	33.5	265 46.4	59.1	38 42.2	46.3							
3	64 43.5	212 25.8	05.4	294 30.8	33.2	280 48.5	59.0	53 44.9	46.3							
4	79 45.9	227 29.0	05.1	309 31.8	32.9	295 50.5	58.9	68 47.5	46.2							
5	94 48.4	242 32.3	-21 04.9	324 32.8	+19 32.6	310 52.6	+14 58.7	83 50.2	+1 46.1							
6	109 50.9	257 35.5	-21 04.6	339 33.8	+19 32.3	325 54.6	+14 58.6	98 52.8	+1 46.0							
7	124 53.3	272 38.8	04.4	354 34.8	32.0	340 56.7	58.5	113 55.5	46.0							
8	139 55.8	287 42.0	04.1	9 35.8	31.6	355 58.8	58.4	128 58.1	45.9							
9	154 58.2	302 45.3	03.8	24 36.9	31.3	11 00.8	58.2	144 00.7	45.8							
10	170 00.7	317 48.5	03.6	39 37.9	31.0	26 02.9	58.1	159 03.4	45.7							
11	185 03.2	332 51.8	-21 03.3	54 38.9	+19 30.7	41 04.9	+14 58.0	174 06.0	+1 45.7							
12	200 05.6	347 55.1	-21 03.0	69 39.9	+19 30.4	56 07.0	+14 57.9	189 08.7	+1 45.6							
13	215 08.1	2 58.3	02.8	84 40.9	30.1	71 09.1	57.7	204 11.3	45.5							
14	230 10.6	18 01.6	02.5	99 41.9	29.7	86 11.1	57.6	219 14.0	45.4							
15	245 13.0	33 04.9	02.2	114 43.0	29.4	101 13.2	57.5	234 16.6	45.4							
16	260 15.5	48 08.2	01.9	129 44.0	29.1	116 15.3	57.4	249 19.2	45.3							
17	275 18.0	63 11.4	-21 01.6	144 45.0	+19 28.8	131 17.3	+14 57.2	264 21.9	+1 45.2							
18	290 20.4	78 14.7	-21 01.3	159 46.0	+19 28.5	146 19.4	+14 57.1	279 24.5	+1 45.1							
19	305 22.9	93 18.0	01.1	174 47.0	28.1	161 21.5	57.0	294 27.2	45.1							
20	320 25.3	108 21.3	00.8	189 48.1	27.8	176 23.5	56.9	309 29.8	45.0							
21	335 27.8	123 24.6	00.5	204 49.1	27.5	191 25.6	56.8	324 32.5	44.9							
22	350 30.3	138 27.9	-21 00.2	219 50.1	27.2	206 27.7	56.6	339 35.1	44.8							
23	5 32.7	153 31.2	-20 59.9	234 51.1	26.9	221 29.7	56.5	354 37.7	44.8							
24	20 35.2	168 34.5	-20 59.6	249 52.1	+19 26.6	236 31.8	+14 56.4	9 40.4	+1 44.7							
Dif	—	+33	+3	+10	-3	+21	-1	+26	-1							

ALMANAQUE NÁUTICO PERSEUS

UT	SOL			● LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna						
	SD: 16 ^h 0 PMG: 11 ^h 46.2 ^m			Edad: 2.3 ^d PHE { 4 ^h : 55'2 12 ^h : 55'1 20 ^h : 54'9 R°: 52 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	R°	Hora	R°						
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	h m	h m	h m	h m	h m							
0	183	24.5	-7	41.8	158	23.9	-21	44.7	95	60 N	16 57	17 39	18 27	11 04	94	16 34	13							
1	198	24.7		42.7	172	54.6	117	-21	54.2	58	17 01	40	26	10 43	87	16 55	21							
2	213	24.9		43.7	187	25.2	116	-22	03.6	56	04	42	25	27 81		17 12	26							
3	228	25.0		44.6	201	55.8	116		12.9	54	08	43	24	13 77		27 29								
4	243	25.2		45.5	216	26.3	115		22.0	52	10	44	23	10 00	75	40 31								
5	258	25.3	-7	46.5	230	56.8	115	-22	31.1	50	17 13	17 46	18 23	9 50	72	17 51	34							
6	273	25.5	-7	47.4	245	27.3	115	-22	40.0	45	17 19	17 48	18 22	9 27	68	18 14	38							
7	288	25.6		48.3	259	57.7	114		48.8	40	24	51	22	9 09	65	33 41								
8	303	25.8		49.3	274	28.0	113	-22	57.5	35	28	53	23	8 54	62	18 49	43							
9	318	25.9		50.2	288	58.4	114	-23	06.1	30	32	17 56	23	41 60		19 03	45							
10	333	26.1		51.1	303	28.6	112		14.6	85	38	18 00	26	19 57		26 48								
11	348	26.2	-7	52.1	317	58.9	113	-23	23.0	10 N	17 44	18 05	18 30	8 00	54	19 47	50							
12	3	26.4	-7	53.0	332	29.1	112	-23	31.2	0	17 50	18 10	18 35	7 42	51	20 06	52							
13	18	26.5		53.9	346	59.2	111		39.4	10 S	17 55	17	41	24 49		25 54								
14	33	26.7		54.9	1	29.3	111		47.4	20	18 01	24	18 50	7 06	45	20 46	56							
15	48	26.8		55.8	15	59.4	111	-23	55.3	30	09	33	19 02	6 44	42	21 09	60							
16	63	26.9		56.7	30	29.4	110	-24	03.0	35	13	39	09	31 41		23 61								
17	78	27.1	-7	57.7	44	59.4	110	-24	10.7	40	18 18	18 45	19 18	6 17	38	21 40	63							
18	93	27.2	-7	58.6	59	29.4	110	-24	18.2	45	18 23	18 54	19 30	6 00	34	21 59	66							
19	108	27.4	-7	59.5	73	59.3	109		25.6	50	30	19 04	45	5 39	30	22 24	69							
20	123	27.5	-8	00.5	88	29.1	108		32.9	52	33	08	19 52	29 28		36 71								
21	138	27.7		01.4	102	59.0	109		40.1	70	37	14	20 00	18 25		22 49	74							
22	153	27.8		02.3	117	28.8	108		47.1	56	40	20	09	5 06	21	23 05	77							
23	168	28.0		03.3	131	58.5	107	-24	54.0	69	45	27	20	4 51	16	24 81								
24	183	28.1	-8	04.2	146	28.2	107	-25	00.8	68	60 S	18 49	19 34	20 33	4 34	9	23 48	88						
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 22 ^h 30.0 ^m			Mag: -4.4 PMG: 12 ^h 37 ^m			Mag: +0.9 PMG: 7 ^h 18 ^m			Mag: -1.9 PMG: 8 ^h 09 ^m			Mag: +0.4 PMG: 23 ^h 13 ^m											
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♎	Dec	hG ♏	Dec	hG ♏	Dec	hG ♏	Dec	hG ♏	Dec									
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /									
0	21	34.3	169	54.9	-20	51.6	250	16.7	+19	18.9	237	21.4	+14	53.4	10	43.8	+1	42.9						
1	36	36.8	184	58.3		51.2	265	17.8		18.6	252	23.5		53.3	25	46.5		42.8						
2	51	39.3	200	01.7		50.8	280	18.8		18.2	267	25.5		53.2	40	49.1		42.8						
3	66	41.7	215	05.1		50.5	295	19.8		17.9	282	27.6		53.1	55	51.7		42.7						
4	81	44.2	230	08.5		50.1	310	20.9		17.6	297	29.7		52.9	70	54.4		42.6						
5	96	46.7	245	11.9	-20	49.7	325	21.9	+19	17.3	312	31.7	+14	52.8	85	57.0	+1	42.5						
6	111	49.1	260	15.3	-20	49.4	340	22.9	+19	17.0	327	33.8	+14	52.7	100	59.7	+1	42.5						
7	126	51.6	275	18.7		49.0	355	24.0		16.6	342	35.9		52.6	116	02.3		42.4						
8	141	54.1	290	22.1		48.6	10	25.0		16.3	357	38.0		52.5	131	04.9		42.3						
9	156	56.5	305	25.5		48.2	25	26.0		16.0	12	40.0		52.3	146	07.6		42.2						
10	171	59.0	320	28.9		47.8	40	27.1		15.7	27	42.1		52.2	161	10.2		42.2						
11	187	01.4	335	32.3	-20	47.4	55	28.1	+19	15.4	42	44.2	+14	52.1	176	12.9	+1	42.1						
12	202	03.9	350	35.8	-20	47.0	70	29.1	+19	15.0	57	46.2	+14	52.0	191	15.5	+1	42.0						
13	217	06.4	5	39.2		46.6	85	30.2		14.7	72	48.3		51.8	206	18.2		41.9						
14	232	08.8	20	42.6		46.2	100	31.2		14.4	87	50.4		51.7	221	20.8		41.9						
15	247	11.3	35	46.1		45.8	115	32.2		14.1	102	52.5		51.6	236	23.4		41.8						
16	262	13.8	50	49.5		45.4	130	33.3		13.7	117	54.5		51.5	251	26.1		41.7						
17	277	16.2	65	52.9	-20	45.0	145	34.3	+19	13.4	132	56.6	+14	51.4	266	28.7	+1	41.7						
18	292	18.7	80	56.4	-20	44.6	160	35.3	+19	13.1	147	58.7	+14	51.2	281	31.4	+1	41.6						
19	307	21.2	95	59.8		44.2	175	36.4		12.8	163	00.8		51.1	296	34.0		41.5						
20	322	23.6	111	03.3		43.8	190	37.4		12.5	178	02.8		51.0	311	36.6		41.4						
21	337	26.1	126	06.7		43.4	205	38.4		12.1	193	04.9		50.9	326	39.3		41.4						
22	352	28.6	141	10.2		43.0	220	39.5		11.8	208	07.0		50.8	341	41.9		41.3						
23	7	31.0	156	13.6		42.5	235	40.5		11.5	223	09.0		50.6	356	44.6		41.2						
24	22	33.5	171	17.1	-20	42.1	250	41.6	+19	11.2	238	11.1	+14	50.5	11	47.2	+1	41.1						
Dif	—			+34			+10			-3			+21			-1			+26			-		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 46.0 ^m			Edad: 3.3 ^d SD: 14'9 PMG: 14 ^h 44 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	183	28.1	-8	04.2	146	28.2	-25	00.8	67	60 N	5 06	5 55	6 37	12 36	80	16 46 27	
1	198	28.3		05.1	160	27.9	107	07.5	66	58	08	53	33	12 08	73	17 14 34	
2	213	28.4		06.0	175	27.6	107	14.1	66	56	08	52	29	11 46	69	36 38	
3	228	28.6		07.0	189	27.2	106	20.5	64	54	09	50	26	29	66	17 55 39	
4	243	28.7		07.9	204	26.7	105	26.8	63	52	10	49	23	13	65	18 10 41	
5	258	28.9	-8	08.8	218	26.3	106	-25	32.9	61	50	5 10	5 48	6 20	11 00	64	18 23 43
6	273	29.0	-8	09.8	233	25.8	105	-25	39.0	61	45	5 11	5 45	6 14	10 33	61	18 51 45
7	288	29.1		10.7	247	25.2	104		44.9	59	40	11	42	09	10 12	59	19 13 46
8	303	29.3		11.6	262	24.7	105		50.7	58	35	10	40	05	9 55	57	31 47
9	318	29.4		12.6	276	24.1	104	-25	56.3	56	30	09	37	6 01	40	56	19 46 48
10	333	29.6		13.5	291	23.5	104	-26	01.8	55	20	07	32	5 54	9 14	54	20 12 50
11	348	29.7	-8	14.4	305	22.8	103	-26	07.2	54	10 N	5 03	5 27	5 48	8 52	53	20 35 51
12	3	29.9	-8	15.3	320	22.1	103	-26	12.5	53	0	4 58	5 22	5 43	8 32	51	20 56 52
13	18	30.0		16.3	334	21.4	103		17.6	51	10 S	51	16	37	8 12	49	21 18 52
14	33	30.2		17.2	349	20.7	103		22.6	50	20	42	5 08	31	7 50	48	21 41 53
15	48	30.3		18.1	3	19.9	102		27.5	49	30	30	4 59	23	25	46	22 07 55
16	63	30.4		19.1	18	19.1	102		32.3	48	35	23	53	19	7 10	45	23 55
17	78	30.6	-8	20.0	32	18.3	102	-26	36.9	46	40	4 13	4 46	5 14	6 53	43	22 41 56
18	93	30.7	-8	20.9	47	17.5	102	-26	41.3	44	45	4 02	4 38	5 08	6 33	41	23 03 57
19	108	30.9		21.8	61	16.6	101		45.7	44	50	3 47	28	5 01	6 08	37	31 59
20	123	31.0		22.8	76	15.7	101		49.9	42	52	40	23	4 58	5 55	36	23 45 59
21	138	31.2		23.7	90	14.8	101		54.0	41	54	32	18	55	41	34	** ** *
22	153	31.3		24.6	105	13.9	101	-26	57.9	39	56	22	12	51	25	31	** ** *
23	168	31.4		25.5	119	12.9	100	-27	01.7	38	58	3 11	4 05	47	5 06	26	** ** *
24	183	31.6	-8	26.5	134	12.0	101	-27	05.4	37	60 S	2 59	3 57	4 42	4 42	19	** ** *

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 26.1 ^m		Mag: -4.3 PMG: 12 ^h 32 ^m		Mag: +1.0 PMG: 7 ^h 17 ^m		Mag: -1.9 PMG: 8 ^h 06 ^m		Mag: +0.4 PMG: 23 ^h 09 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	22	33.5	171	17.1	-20	42.1	250	41.6	+19	11.2	238	11.1	+14	50.5	11	47.2	+1	41.1
1	37	35.9	186	20.6		41.7	265	42.6		10.8	253	13.2		50.4	26	49.9		41.1
2	52	38.4	201	24.0		41.3	280	43.6		10.5	268	15.3		50.3	41	52.5		41.0
3	67	40.9	216	27.5		40.8	295	44.7		10.2	283	17.3		50.1	56	55.1		40.9
4	82	43.3	231	31.0		40.4	310	45.7		09.9	298	19.4		50.0	71	57.8		40.8
5	97	45.8	246	34.4	-20	40.0	325	46.7	+19	09.5	313	21.5	+14	49.9	87	00.4	+1	40.8
6	112	48.3	261	37.9	-20	39.5	340	47.8	+19	09.2	328	23.6	+14	49.8	102	03.1	+1	40.7
7	127	50.7	276	41.4		39.1	355	48.8		08.9	343	25.6		49.7	117	05.7		40.6
8	142	53.2	291	44.9		38.7	10	49.9		08.6	358	27.7		49.5	132	08.3		40.6
9	157	55.7	306	48.4		38.2	25	50.9		08.3	13	29.8		49.4	147	11.0		40.5
10	172	58.1	321	51.9		37.8	40	52.0		07.9	28	31.9		49.3	162	13.6		40.4
11	188	00.6	336	55.3	-20	37.3	55	53.0	+19	07.6	43	34.0	+14	49.2	177	16.3	+1	40.3
12	203	03.1	351	58.8	-20	36.9	70	54.0	+19	07.3	58	36.0	+14	49.1	192	18.9	+1	40.3
13	218	05.5	7	02.3		36.4	85	55.1		07.0	73	38.1		48.9	207	21.5		40.2
14	233	08.0	22	05.8		35.9	100	56.1		06.6	88	40.2		48.8	222	24.2		40.1
15	248	10.4	37	09.3		35.5	115	57.2		06.3	103	42.3		48.7	237	26.8		40.0
16	263	12.9	52	12.9		35.0	130	58.2		06.0	118	44.3		48.6	252	29.5		40.0
17	278	15.4	67	16.4	-20	34.5	145	59.2	+19	05.7	133	46.4	+14	48.5	267	32.1	+1	39.9
18	293	17.8	82	19.9	-20	34.1	161	00.3	+19	05.3	148	48.5	+14	48.3	282	34.7	+1	39.8
19	308	20.3	97	23.4		33.6	176	01.3		05.0	163	50.6		48.2	297	37.4		39.7
20	323	22.8	112	26.9		33.1	191	02.4		04.7	178	52.6		48.1	312	40.0		39.7
21	338	25.2	127	30.4		32.7	206	03.4		04.4	193	54.7		48.0	327	42.7		39.6
22	353	27.7	142	34.0		32.2	221	04.5		04.0	208	56.8		47.9	342	45.3		39.5
23	8	30.2	157	37.5		31.7	236	05.5		03.7	223	58.9		47.7	357	48.0		39.5
24	23	32.6	172	41.0	-20	31.2	251	06.6	+19	03.4	239	01.0	+14	47.6	12	50.6	+1	39.4
Dif	—		+35		+5		+10		-3		+21		-1		+26		-	

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 45.8 ^m			Edad: 4.3 ^d SD: 14'8 PMG: 15 ^h 36 ^m PHE { 4 ^h : 54'4 12 ^h : 54'4 20 ^h : 54'3 R°: 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m
0	183	31.6	-8	26.5	134	12.0	-27	05.4	60 N	16 51	17 33	18 21	13 56	53	17 13	57	
1	198	31.7		27.4	148	41.0		09.0	58		56		35	21	13 21	54	
2	213	31.9		28.2	163	10.0		12.4	56	16 59	37	20	12 55	54	18 14	56	
3	228	32.0		29.2	177	39.0		15.7	54	17 03	39	19		35	54	34 56	
4	243	32.1		30.2	192	07.9		18.8	52		06	40	19	18	54	18 51	
5	258	32.3	-8	31.1	206	36.9	-27	21.8	50	17 09	17 42	18 19	12 04	53	19 06	55	
6	273	32.4	-8	32.0	221	05.8	-27	24.7	45	17 15	17 45	18 19	11 34	54	19 36	54	
7	288	32.6		32.9	235	34.8		27.4	40		21	48	19	11 11	54	19 58	
8	303	32.7		33.9	250	03.7		30.0	35	25	51	20	10 52	54	20 19	54	
9	318	32.8		34.8	264	32.6		32.5	30	29	53	21	36	54	20 34	54	
10	333	33.0		35.7	279	01.5		34.8	20	37	17 59	24	10 08	54	21 02	54	
11	348	33.1	-8	36.6	293	30.4	-27	37.0	10 N	17 43	18 04	18 29	9 45	53	21 26	53	
12	3	33.3	-8	37.6	307	59.2	-27	39.1	0	17 49	18 10	18 34	9 23	53	21 48	53	
13	18	33.4		38.5	322	28.1		41.0	10 S	17 55	17	41	9 01	53	22 10	52	
14	33	33.5		39.4	336	57.0		42.8	20	18 02	25	18 51	8 38	52	22 34	52	
15	48	33.7		40.3	351	25.9		44.4	30		10	34	19 03	8 11	52	23 02	
16	63	33.8		41.3	5	54.7		45.9	35	15	40	11	7 55	51	18	51	
17	78	33.9	-8	42.2	20	23.6	-27	47.3	40	18 20	18 48	19 21	7 36	51	23 37	50	
18	93	34.1	-8	43.1	34	52.5	-27	48.6	45	18 26	18 56	19 33	7 14	50	** ** *	**	
19	108	34.2		44.0	49	21.3		49.7	50	33	19 07	49	6 45	50	** ** *	**	
20	123	34.4		44.9	63	50.2		50.6	52	37	12	19 56	31	49	** ** *	**	
21	138	34.5		45.9	78	19.1		51.5	54	40	18	20 05	6 15	48	0 01	62	
22	153	34.6		46.8	92	47.9		52.2	56	45	24	14	5 56	47	20	63	
23	168	34.8		47.7	107	16.8		52.7	58	49	32	26	32	45	0 44	64	
24	183	34.9	-8	48.6	121	45.7	-27	53.1	60 S	18 54	19 40	20 39	5 01	42	1 15	68	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 22 ^h 22.2 ^m		Mag: -4.3 PMG: 12 ^h 26 ^m		Mag: +1.0 PMG: 7 ^h 15 ^m		Mag: -1.9 PMG: 8 ^h 03 ^m		Mag: +0.4 PMG: 23 ^h 05 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	23	32.6	172	41.0	-20	31.2	251	06.6	+19	03.4
1	38	35.1	187	44.5		30.7	266	07.6		03.1
2	53	37.5	202	48.1		30.2	281	08.7		02.7
3	68	40.0	217	51.6		29.7	296	09.7		02.4
4	83	42.5	232	55.1		29.3	311	10.8		02.1
5	98	44.9	247	58.7	-20	28.8	326	11.8	+19	01.8
6	113	47.4	263	02.2	-20	28.3	341	12.8	+19	01.4
7	128	49.9	278	05.8		27.8	356	13.9		01.1
8	143	52.3	293	09.3		27.3	11	14.9		00.8
9	158	54.8	308	12.9		26.7	26	16.0		00.5
10	173	57.3	323	16.4		26.2	41	17.0	+19	00.1
11	188	59.7	338	20.0	-20	25.7	56	18.1	+18	59.8
12	204	02.2	353	23.6	-20	25.2	71	19.1	+18	59.5
13	219	04.7	8	27.1		24.7	86	20.2		59.1
14	234	07.1	23	30.7		24.2	101	21.2		58.8
15	249	09.6	38	34.3		23.7	116	22.3		58.5
16	264	12.0	53	37.8		23.1	131	23.4		58.2
17	279	14.5	68	41.4	-20	22.6	146	24.4	+18	57.8
18	294	17.0	83	45.0	-20	22.1	161	25.5	+18	57.5
19	309	19.4	98	48.6		21.5	176	26.5		57.2
20	324	21.9	113	52.1		21.0	191	27.6		56.9
21	339	24.4	128	55.7		20.5	206	28.6		56.5
22	354	26.8	143	59.3		19.9	221	29.7		56.2
23	9	29.3	159	02.9		19.4	236	30.7		55.9
24	24	31.8	174	06.5	-20	18.9	251	31.8	+18	55.6
Dif	—		+36		+5		+11		-3	
									+21	
									-1	
									+26	
									-	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 11 ^h 45.6 ^m			Edad: 5.3 ^d PHE { 4 ^h : 54 ^h /2 12 ^h : 54 ^h /2 20 ^h : 54 ^h /2 R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	183	34.9	-8	48.6	121	45.7	99	-27	53.1	3	60 N	5 11	5 59	6 42	14 48	24 18 08 81
1	198	35.0		49.5	136	14.6	99		53.4	2	58	12	57	37	14 13	32 18 43 73
2	213	35.2		50.5	150	43.5	99		53.6	0	56	12	55	33	13 48	35 19 08 69
3	228	35.3		51.4	165	12.4	99		53.6	1	54	13	54	30	28 37	28 67
4	243	35.4		52.3	179	41.3	99		53.5	3	52	13	52	26	13 11	39 19 45 65
5	258	35.6	-8	53.2	194	10.2	99	-27	53.2	3	50	5 13	5 51	6 23	12 56	41 20 00 63
6	273	35.7	-8	54.1	208	39.1	99	-27	52.8	4	45	5 13	5 47	6 17	12 27	43 20 29 60
7	288	35.8		55.1	223	08.1	100		52.3	5	40	13	44	11	12 04	44 20 52 58
8	303	36.0		56.0	237	37.1	100		51.7	6	35	12	41	07	11 44	47 21 11 56
9	318	36.1		56.9	252	06.0	99		50.9	8	30	10	38	6 02	28 47	27 55
10	333	36.2		57.8	266	35.0	100		49.9	10	20	07	33	5 55	11 00	49 21 54 54
11	348	36.4	-8	58.7	281	04.1	101	-27	48.9	10	10 N	5 03	5 27	5 49	10 37	49 22 18 51
12	3	36.5	-8	59.7	295	33.1	100	-27	47.7	12	0	4 57	5 21	5 42	10 15	50 22 39 50
13	18	36.6	-9	00.6	310	02.1	100		46.4	13	10 S	50	15	36	9 52	52 23 01 48
14	33	36.8		01.5	324	31.2	101		44.9	15	20	40	5 07	29	29 53	24 47
15	48	36.9		02.4	339	00.3	101		43.3	16	30	28	4 57	21	9 01	54 23 51 45
16	63	37.0		03.3	353	29.4	101		41.6	17	35	20	50	16	8 45	55 *** ** *
17	78	37.2	-9	04.2	7	58.5	101	-27	39.7	19	40	4 10	4 43	5 11	8 26	56 *** ** *
18	93	37.3	-9	05.2	22	27.7	102	-27	37.7	20	45	3 58	4 34	5 05	8 03	57 0 00 48
19	108	37.4		06.1	36	56.9	102		35.6	21	50	42	24	4 57	7 33	59 30 46
20	123	37.5		07.0	51	26.1	102		33.3	23	52	35	18	54	19 59	0 44 46
21	138	37.7		07.9	65	55.3	102		30.9	24	54	26	13	50	7 02	60 1 01 45
22	153	37.8		08.8	80	24.6	103		28.4	25	56	16	4 06	46	6 41	63 21 44
23	168	37.9		09.7	94	53.9	103		25.7	27	58	3 05	3 59	41	6 16	65 1 47 41
24	183	38.1	-9	10.7	109	23.2	103	-27	22.9	28	60 S	2 51	3 50	4 36	5 41	69 2 22 37

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: -4.2 22 ^h 18.2 ^m		Mag: -4.2 PMG: 12 ^h 21 ^m		Mag: +1.0 PMG: 7 ^h 13 ^m		Mag: -1.9 PMG: 7 ^h 59 ^m		Mag: +0.4 PMG: 23 ^h 00 ^m	
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec
h	°	'	°	'	°	'	°	'	°	'
0	24	31.8	174	06.5	-20	18.9	251	31.8	+18	55.6
1	39	34.2	189	10.1		18.3	266	32.8		55.2
2	54	36.7	204	13.7		17.8	281	33.9		54.9
3	69	39.2	219	17.3		17.2	296	34.9		54.6
4	84	41.6	234	20.9		16.7	311	36.0		54.2
5	99	44.1	249	24.5	-20	16.1	326	37.1	+18	53.9
6	114	46.5	264	28.1	-20	15.5	341	38.1	+18	53.6
7	129	49.0	279	31.7		15.0	356	39.2		53.3
8	144	51.5	294	35.3		14.4	11	40.2		52.9
9	159	53.9	309	38.9		13.9	26	41.3		52.6
10	174	56.4	324	42.6		13.3	41	42.3		52.3
11	189	58.9	339	46.2	-20	12.7	56	43.4	+18	52.0
12	205	01.3	354	49.8	-20	12.1	71	44.5	+18	51.6
13	220	03.8	9	53.4		11.6	86	45.5		51.3
14	235	06.3	24	57.0		11.0	101	46.6		51.0
15	250	08.7	40	00.7		10.4	116	47.6		50.6
16	265	11.2	55	04.3		09.8	131	48.7		50.3
17	280	13.7	70	07.9	-20	09.2	146	49.8	+18	50.0
18	295	16.1	85	11.6	-20	08.6	161	50.8	+18	49.7
19	310	18.6	100	15.2		08.1	176	51.9		49.3
20	325	21.0	115	18.8		07.5	191	52.9		49.0
21	340	23.5	130	22.5		06.9	206	54.0		48.7
22	355	26.0	145	26.1		06.3	221	55.1		48.3
23	10	28.4	160	29.8		05.7	236	56.1		48.0
24	25	30.9	175	33.4	-20	05.1	251	57.2	+18	47.7
Dif	—		+36		+6		+11		-3	
							+21		-1	
									+26	
									-1	

UT	SOL			 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 45.4 ^m			Edad: 6.3 ^d SD: 14'8 PMG: 17 ^h 17 ^m PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3 R°: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m m	h m m	h m m	
0	183 38.1	-9 10.7	109 23.2	104	-27 22.9	29	60 N	16 45	17 28	18 16	15 12 12	19 29 92			
1	198 38.2	11.6	123 52.6	103	20.0	30	58	50	30	15	14 45 19	19 56 84			
2	213 38.3	12.5	138 21.9	105	17.0	32	56	54	32	15	23 24	20 17 80			
3	228 38.5	13.4	152 51.4	105	13.8	32	54	16 58	34	15	14 05 28	35 76			
4	243 38.6	14.3	167 20.8	104	10.5	33	52	17 02	36	15	13 50 30	20 50 73			
5	258 38.7	-9 15.2	181 50.3	105	-27 07.1	34	50	17 05	17 38	18 15	13 37 32	21 03 70			
6	273 38.8	-9 16.2	196 19.8	105	-27 03.5	36	45	17 12	17 42	18 16	13 10 36	21 29 66			
7	288 39.0	17.1	210 49.3	105	-26 59.8	37	40	18	45	16	12 48 40	21 50 63			
8	303 39.1	18.0	225 18.9	106	56.0	38	35	23	48	18	31 41	22 07 61			
9	318 39.2	18.9	239 48.5	106	52.1	39	30	27	51	19	12 15 43	22 59			
10	333 39.3	19.8	254 18.2	107	48.0	41	20	35	17 57	23	11 49 46	22 48 55			
11	348 39.5	-9 20.7	268 47.9	107	-26 43.8	42	10 N	17 42	18 03	18 28	11 26 49	23 09 53			
12	3 39.6	-9 21.6	283 17.6	107	-26 39.5	43	0	17 49	18 10	18 34	11 05 51	23 29 50			
13	18 39.7	22.5	297 47.4	108	35.0	45	10 S	17 55	17	42	10 44 53	23 49 48			
14	33 39.9	23.5	312 17.2	108	30.4	46	20	18 03	25	18 52	10 22 55	** ** *			
15	48 40.0	24.4	326 47.0	108	25.7	47	30	11	36	19 05	9 55 58	** ** *			
16	63 40.1	25.3	341 16.9	109	20.9	48	35	16	42	13	40 59	0 07 45			
17	78 40.2	-9 26.2	355 46.9	110	-26 16.0	49	40	18 22	18 50	19 23	9 22 61	0 26 42			
18	93 40.4	-9 27.1	10 16.8	109	-26 10.9	51	45	18 29	18 59	19 36	9 00 64	0 48 40			
19	108 40.5	28.0	24 46.8	110	05.7	52	50	37	19 11	19 52	8 32 68	1 16 37			
20	123 40.6	28.9	39 16.9	111	-26 00.4	53	52	40	16	20 00	18 70	30 35			
21	138 40.7	29.8	53 47.0	111	-25 55.0	54	54	44	22	10	8 02 73	1 46 33			
22	153 40.9	30.7	68 17.1	111	49.4	56	56	49	29	20	7 44 75	2 05 30			
23	168 41.0	31.7	82 47.3	112	43.7	57	58	18 54	37	32	7 21 80	28 26			
24	183 41.1	-9 32.6	97 17.5	112	-25 37.9	58	60 S	19 00	19 46	20 47	6 50 88	2 59 18			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 14.3 ^m		Mag: -4.1 PMG: 12 ^h 15 ^m		Mag: +1.0 PMG: 7 ^h 12 ^m		Mag: -1.9 PMG: 7 ^h 56 ^m		Mag: +0.4 PMG: 22 ^h 56 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	25 30.9	175 33.4	-20 05.1	251 57.2	+18 47.7	240 41.0	+14 41.9	14 57.3	+1 35.9	
1	40 33.4	190 37.1	04.5	266 58.3	47.4	255 43.0	41.8	29 59.9	35.8	
2	55 35.8	205 40.7	03.9	281 59.3	47.0	270 45.1	41.7	45 02.6	35.8	
3	70 38.3	220 44.4	03.2	297 00.4	46.7	285 47.2	41.6	60 05.2	35.7	
4	85 40.8	235 48.0	02.6	312 01.5	46.4	300 49.3	41.5	75 07.8	35.6	
5	100 43.2	250 51.7	-20 02.0	327 02.5	+18 46.0	315 51.4	+14 41.3	90 10.5	+1 35.6	
6	115 45.7	265 55.3	-20 01.4	342 03.6	+18 45.7	330 53.5	+14 41.2	105 13.1	+1 35.5	
7	130 48.1	280 59.0	00.8	357 04.6	45.4	345 55.6	41.1	120 15.7	35.4	
8	145 50.6	296 02.7	-20 00.2	12 05.7	45.0	0 57.7	41.0	135 18.4	35.4	
9	160 53.1	311 06.3	-19 59.5	27 06.8	44.7	15 59.8	40.9	150 21.0	35.3	
10	175 55.5	326 10.0	58.9	42 07.8	44.4	31 01.8	40.8	165 23.7	35.2	
11	190 58.0	341 13.7	-19 58.3	57 08.9	+18 44.1	46 03.9	+14 40.6	180 26.3	+1 35.1	
12	206 00.5	356 17.3	-19 57.7	72 10.0	+18 43.7	61 06.0	+14 40.5	195 28.9	+1 35.1	
13	221 02.9	11 21.0	57.0	87 11.0	43.4	76 08.1	40.4	210 31.6	35.0	
14	236 05.4	26 24.7	56.4	102 12.1	43.1	91 10.2	40.3	225 34.2	34.9	
15	251 07.9	41 28.4	55.7	117 13.2	42.7	106 12.3	40.2	240 36.8	34.9	
16	266 10.3	56 32.1	55.1	132 14.3	42.4	121 14.4	40.1	255 39.5	34.8	
17	281 12.8	71 35.7	-19 54.5	147 15.3	+18 42.1	136 16.5	+14 39.9	270 42.1	+1 34.7	
18	296 15.3	86 39.4	-19 53.8	162 16.4	+18 41.7	151 18.6	+14 39.8	285 44.8	+1 34.6	
19	311 17.7	101 43.1	53.2	177 17.5	41.4	166 20.7	39.7	300 47.4	34.6	
20	326 20.2	116 46.8	52.5	192 18.5	41.1	181 22.8	39.6	315 50.0	34.5	
21	341 22.6	131 50.5	51.9	207 19.6	40.8	196 24.8	39.5	330 52.7	34.4	
22	356 25.1	146 54.2	51.2	222 20.7	40.4	211 26.9	39.4	345 55.3	34.4	
23	11 27.6	161 57.9	50.6	237 21.7	40.1	226 29.0	39.3	0 57.9	34.3	
24	26 30.0	177 01.6	-19 49.9	252 22.8	+18 39.8	241 31.1	+14 39.1	16 00.6	+1 34.2	
Dif	—	+37	+6	+11	-3	+21	-1	+26	-1	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 45.2 ^m			Edad: 7.3 ^d SD: 14'8 PMG: 18 ^h 06 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	183	41.1	-9	32.6	97	17.5	-25	37.9	5	16	6	04	6	47	15
1	198	41.2		33.5	111	47.8		32.0	16	6	02	42	15	03	10
2	213	41.3		34.4	126	18.1		26.0	16	5	59	37	14	46	15
3	228	41.5		35.3	140	48.5		19.8	16		57	33	31	19	21
4	243	41.6		36.2	155	18.9		13.6	16		56	30	19	21	22
5	258	41.7	-9	37.1	169	49.3	-25	07.2	5	16	5	54	6	27	14
6	273	41.8	-9	38.0	184	19.8	-25	00.7	5	16	5	50	6	19	13
7	288	42.0		38.9	198	50.4	-24	54.0	15		46	14	26	32	22
8	303	42.1		39.8	213	21.0		47.3	13		43	08	13	11	34
9	318	42.2		40.7	227	51.6		40.5	12		40	6	04	12	57
10	333	42.3		41.6	242	22.3		33.5	08		34	5	56	34	41
11	348	42.4	-9	42.6	256	53.0	-24	26.4	5	03	5	27	5	49	12
12	3	42.6	-9	43.5	271	23.8	-24	19.2	4	57	5	21	5	42	11
13	18	42.7		44.4	285	54.7		11.9	49		14	35	36	50	11
14	33	42.8		45.3	300	25.5	-24	04.5	39		5	05	27	11	15
15	48	42.9		46.2	314	56.5	-23	57.0	25		4	54	19	10	52
16	63	43.0		47.1	329	27.4		49.3	17		48	14	38	60	0
17	78	43.2	-9	48.0	343	58.5	-23	41.6	4	07	4	40	5	08	10
18	93	43.3	-9	48.9	358	29.5	-23	33.7	3	54	4	31	5	01	10
19	108	43.4		49.8	13	00.6		25.8	37		19	4	53	9	38
20	123	43.5		50.7	27	31.8		17.7	29		14	49	27	73	2
21	138	43.6		51.6	42	03.0		09.5	20		08	45	9	13	77
22	153	43.7		52.5	56	34.3	-23	01.2	3	10	4	01	41	8	58
23	168	43.9		53.4	71	05.6	-22	52.9	2	58	3	53	36	39	85
24	183	44.0	-9	54.3	85	36.9	-22	44.4	2	43	3	44	4	30	8
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 22 ^h 10.4 ^m		Mag: -4.1 PMG: 12 ^h 09 ^m		Mag: +1.0 PMG: 7 ^h 10 ^m		Mag: -1.9 PMG: 7 ^h 53 ^m		Mag: +0.4 PMG: 22 ^h 52 ^m						
	hG ♂		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	26	30.0	177	01.6	-19	49.9	241	31.1	+14	39.1					
1	41	32.5	192	05.3		49.2	256	33.2		39.0					
2	56	35.0	207	09.0		48.6	271	35.3		38.9					
3	71	37.4	222	12.7		47.9	286	37.4		38.8					
4	86	39.9	237	16.4		47.2	301	39.5		38.7					
5	101	42.4	252	20.1	-19	46.6	316	41.6	+14	38.6					
6	116	44.8	267	23.8	-19	45.9	331	43.7	+14	38.4					
7	131	47.3	282	27.5		45.2	346	45.8		38.3					
8	146	49.8	297	31.2		44.5	1	47.9		38.2					
9	161	52.2	312	34.9		43.8	16	50.0		38.1					
10	176	54.7	327	38.6		43.2	31	52.1		38.0					
11	191	57.1	342	42.3	-19	42.5	46	54.2	+14	37.9					
12	206	59.6	357	46.1	-19	41.8	61	56.3	+14	37.8					
13	222	02.1	12	49.8		41.1	76	58.4		37.6					
14	237	04.5	27	53.5		40.4	92	00.4		37.5					
15	252	07.0	42	57.2		39.7	107	02.5		37.4					
16	267	09.5	58	00.9		39.0	122	04.6		37.3					
17	282	11.9	73	04.7	-19	38.3	137	06.7	+14	37.2					
18	297	14.4	88	08.4	-19	37.6	152	08.8	+14	37.1					
19	312	16.9	103	12.1		36.9	167	10.9		36.9					
20	327	19.3	118	15.9		36.2	182	13.0		36.8					
21	342	21.8	133	19.6		35.5	197	15.1		36.7					
22	357	24.3	148	23.3		34.8	212	17.2		36.6					
23	12	26.7	163	27.0		34.1	227	19.3		36.5					
24	27	29.2	178	30.8	-19	33.4	242	21.4	+14	36.4					
Dif	—		+37		+7		+21		-1						
									+26	-1					

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 11 ^h 45.0 ^m			Edad: 8.3 ^d SD: 14 ^h 9 PMG: 18 ^h 53 ^m			PHE { 4 ^h : 54 ^h 6 12 ^h : 54 ^h 7 20 ^h : 54 ^h 9 R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°	
h	° /	° /	° /	° /		° /		°		h m	h m	h m	h m m	h m m	h m m			
0	183	44.0	-9	54.3	85	36.9	124	-22	44.4	86	60 N	16 40	17 22	18 11	15 27	4	22 31 92	
1	198	44.1		55.2	100	08.3	125		35.8	86	58	45	25	10	13	8	45 87	
2	213	44.2		56.1	114	39.8	125		27.0	88	56	50	28	11	15 01	11	22 57 83	
3	228	44.3		57.0	129	11.3	125		18.2	88	54	54	30	11	14 50	15	23 07 80	
4	243	44.4		57.9	143	42.8	125		09.3	90	52	16 58	32	11	40 18		16 77	
5	258	44.6	-9	58.8	158	14.4	126	-22	00.3	90	50	17 01	17 34	18 11	14 31	20	23 24 75	
6	273	44.7	-9	59.7	172	46.1	127	-21	51.2	91	45	17 08	17 38	18 12	14 13	25	23 41 70	
7	288	44.8	-10	00.6	187	17.7	126		42.0	92	40	15	42	14	13 58	29	23 55 66	
8	303	44.9		01.5	201	49.5	128		32.6	94	35	20	46	15	45 32		** ** *	
9	318	45.0		02.4	216	21.3	128		23.2	94	30	25	49	17	34 35		** ** *	
10	333	45.1		03.3	230	53.1	128		13.7	95	20	34	17 56	22	13 15	39	** ** *	
11	348	45.3	-10	04.2	245	25.0	129	-21	04.1	96	10 N	17 41	18 02	18 27	12 58	43	0 00 51	
12	3	45.4	-10	05.1	259	56.9	129	-20	54.4	97	0	17 48	18 09	18 34	12 42	47	0 18 47	
13	18	45.5		06.1	274	28.8	129		44.6	98	10 S	17 56	17	42	26 51		35 44	
14	33	45.6		07.0	289	00.8	130		34.7	99	20	18 04	26	18 52	12 09	55	0 54 40	
15	48	45.7		07.9	303	32.9	131		24.7	100	30	13	37	19 06	11 49	60	1 15 36	
16	63	45.8		08.8	318	05.0	131		14.6	101	35	18	44	15	38 62		27 34	
17	78	45.9	-10	09.6	332	37.1	131	-20	04.4	102	40	18 24	18 52	19 26	11 25	65	1 42 30	
18	93	46.0	-10	10.5	347	09.3	132	-19	54.1	103	45	18 31	19 02	19 39	11 09	69	1 58 27	
19	108	46.2		11.4	1	41.5	132		43.7	104	50	40	14	19 57	10 49	75	2 19 22	
20	123	46.3		12.3	16	13.8	133		33.2	105	52	44	20	20 05	40 77		29 20	
21	138	46.4		13.2	30	46.1	133		22.7	105	54	48	26	14	30 79		40 17	
22	153	46.5		14.1	45	18.4	133		12.0	107	56	53	34	26	18 83		2 52 14	
23	168	46.6		15.0	59	50.8	134	-19	01.3	107	58	18 59	42	39	10 04	87	3 06 10	
24	183	46.7	-10	15.9	74	23.3	135	-18	50.4	109	60 S	19 05	19 51	20 54	9 48	92	3 23 5	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 06.4 ^m		Mag: -4.2 PMG: 12 ^h 03 ^m			Mag: +1.0 PMG: 7 ^h 08 ^m			Mag: -1.9 PMG: 7 ^h 49 ^m			Mag: +0.4 PMG: 22 ^h 48 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec				
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /				
0	27	29.2	178	30.8	-19	33.4	252	48.6	+18	31.8	242	21.4	+14	36.4	17	03.9	+1	32.5
1	42	31.6	193	34.5		32.6	267	49.7		31.5	257	23.5		36.3	32	06.5		32.5
2	57	34.1	208	38.3		31.9	282	50.8		31.1	272	25.6		36.1	47	09.1		32.4
3	72	36.6	223	42.0		31.2	297	51.9		30.8	287	27.7		36.0	62	11.8		32.3
4	87	39.0	238	45.7		30.5	312	53.0		30.5	302	29.8		35.9	77	14.4		32.2
5	102	41.5	253	49.5	-19	29.8	327	54.1	+18	30.1	317	31.9	+14	35.8	92	17.0	+1	32.2
6	117	44.0	268	53.2	-19	29.0	342	55.1	+18	29.8	332	34.0	+14	35.7	107	19.7	+1	32.1
7	132	46.4	283	57.0		28.3	357	56.2		29.5	347	36.1		35.6	122	22.3		32.0
8	147	48.9	299	00.7		27.6	12	57.3		29.1	2	38.2		35.5	137	24.9		32.0
9	162	51.4	314	04.5		26.8	27	58.4		28.8	17	40.3		35.3	152	27.6		31.9
10	177	53.8	329	08.2		26.1	42	59.5		28.5	32	42.4		35.2	167	30.2		31.8
11	192	56.3	344	12.0	-19	25.4	58	00.6	+18	28.1	47	44.5	+14	35.1	182	32.8	+1	31.8
12	207	58.7	359	15.7	-19	24.6	73	01.6	+18	27.8	62	46.6	+14	35.0	197	35.5	+1	31.7
13	223	01.2	14	19.5		23.9	88	02.7		27.5	77	48.7		34.9	212	38.1		31.6
14	238	03.7	29	23.2		23.1	103	03.8		27.1	92	50.8		34.8	227	40.8		31.6
15	253	06.1	44	27.0		22.4	118	04.9		26.8	107	52.9		34.7	242	43.4		31.5
16	268	08.6	59	30.7		21.6	133	06.0		26.5	122	55.0		34.6	257	46.0		31.4
17	283	11.1	74	34.5	-19	20.9	148	07.1	+18	26.1	137	57.1	+14	34.4	272	48.7	+1	31.3
18	298	13.5	89	38.3	-19	20.1	163	08.2	+18	25.8	152	59.2	+14	34.3	287	51.3	+1	31.3
19	313	16.0	104	42.0		19.4	178	09.2		25.5	168	01.3		34.2	302	53.9		31.2
20	328	18.5	119	45.8		18.6	193	10.3		25.1	183	03.4		34.1	317	56.6		31.1
21	343	20.9	134	49.6		17.9	208	11.4		24.8	198	05.5		34.0	332	59.2		31.1
22	358	23.4	149	53.3		17.1	223	12.5		24.5	213	07.6		33.9	348	01.8		31.0
23	13	25.9	164	57.1		16.3	238	13.6		24.1	228	09.7		33.8	3	04.5		30.9
24	28	28.3	180	00.9	-19	15.6	253	14.7	+18	23.8	243	11.8	+14	33.6	18	07.1	+1	30.9
Dif	—		+38		+7		+11		-3		+21		-1		+26		-	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 16'1 PMG: 11 ^h 44.8 ^m				Edad: 9.3 ^d PHE { 4 ^h : 55'1 12 ^h : 55'3 20 ^h : 55'5 Rº: 44 ^m																			
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m		
0	183	46.7	-10	15.9	74	23.3	-18	50.4	109	39.5	60 N	5	20	6	09	6	52	15	30	0	**	**	**	
1	198	46.8		16.8	88	55.7		134	109	39.5	58	20		06		46		20	4		**	**	**	
2	213	46.9		17.7	103	28.2		135	110	28.5	56	20		03		42		11	8		**	**	**	
3	228	47.0		18.6	118	00.8		136	111	17.4	54	20		6 01		37	15	03	11		**	**	**	
4	243	47.2		19.5	132	33.4	-18	136	112	06.2	52	20		5 59		33	14	56	14		**	**	**	
5	258	47.3	-10	20.4	147	06.0	-17	136	113	54.9	50	5	19	5	57	6	30	14	50	16		**	**	**
6	273	47.4	-10	21.3	161	38.7	-17	137	113	43.6	45	5	18	5	52	6	22	14	36	21		**	**	**
7	288	47.5		22.2	176	11.4		137	115	32.1	40	17		48		16	25	25			**	**	**	
8	303	47.6		23.1	190	44.1		137	115	20.6	35	15		44		10	16	27		0	07	61		
9	318	47.7		24.0	205	16.9	-17	138	116	09.0	30	13		41	6	05	14	07	31		17	58		
10	333	47.8		24.9	219	49.7	-16	138	117	57.3	20	08		34	5	56	13	52	36		35	53		
11	348	47.9	-10	25.8	234	22.5	-16	138	118	45.5	10 N	5	03	5	27	5	49	13	40	40	0	50	48	
12	3	48.0	-10	26.7	248	55.4	-16	139	118	33.7	0	4	56	5	20	5	41	13	27	45	1	04	45	
13	18	48.1		27.6	263	28.3		139	120	21.7	10 S	48		13		34	15	48		18	41			
14	33	48.2		28.5	278	01.2	-16	139	120	09.7	20	37		5 03		26	13	02	53		33	36		
15	48	48.3		29.4	292	34.2	-15	140	121	57.6	30	23		4 52		17	12	47	58	1	50	32		
16	63	48.4		30.3	307	07.2		140	122	45.4	35	14		45		11	38	61		2	00	29		
17	78	48.6	-10	31.2	321	40.2	-15	140	122	33.2	40	4	03	4	37	5	05	12	28	65	2	11	25	
18	93	48.7	-10	32.0	336	13.3	-15	141	123	20.9	45	3	50	4	27	4	58	12	16	69	2	24	22	
19	108	48.8		32.9	350	46.3	-15	140	124	08.5	50	33		15		49	12	02	74		40	17		
20	123	48.9		33.8	5	19.5	-14	142	125	56.0	52	24		09		45	11	55	76		47	15		
21	138	49.0		34.7	19	52.6		141	126	43.4	54	15		4 03		41	48	79		2	55	12		
22	153	49.1		35.6	34	25.8		142	126	30.8	56	3	03	3	55	36	39	82		3	04	9		
23	168	49.2		36.5	48	59.0		142	127	18.1	58	2	50	47		30	30	86		15	5			
24	183	49.3	-10	37.4	63	32.2	-14	142	128	05.3	60 S	2	35	3	37	4	24	11	19	90	3	27	1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 22 ^h 02.5 ^m		Mag: -4.2 PMG: 11 ^h 57 ^m		Mag: +1.0 PMG: 7 ^h 07 ^m		Mag: -1.9 PMG: 7 ^h 46 ^m		Mag: +0.4 PMG: 22 ^h 44 ^m							
	hG ♀	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	28	28.3	180	00.9	-19	15.6	243	11.8	+14	33.6						
1	43	30.8	195	04.6		14.8	258	13.9		33.5						
2	58	33.2	210	08.4		14.0	273	16.0		33.4						
3	73	35.7	225	12.2		13.2	288	18.1		33.3						
4	88	38.2	240	15.9		12.5	303	20.2		33.2						
5	103	40.6	255	19.7	-19	11.7	318	22.3	+14	33.1						
6	118	43.1	270	23.5	-19	10.9	333	24.4	+14	33.0						
7	133	45.6	285	27.3		10.1	348	26.5		32.9						
8	148	48.0	300	31.0		09.3	3	28.6		32.7						
9	163	50.5	315	34.8		08.6	18	30.7		32.6						
10	178	53.0	330	38.6		07.8	33	32.8		32.5						
11	193	55.4	345	42.4	-19	07.0	48	35.0	+14	32.4						
12	208	57.9	0	46.1	-19	06.2	63	37.1	+14	32.3						
13	224	00.4	15	49.9		05.4	78	39.2		32.2						
14	239	02.8	30	53.7		04.6	93	41.3		32.1						
15	254	05.3	45	57.5		03.8	108	43.4		32.0						
16	269	07.7	61	01.3		03.0	123	45.5		31.9						
17	284	10.2	76	05.0	-19	02.2	138	47.6	+14	31.7						
18	299	12.7	91	08.8	-19	01.4	153	49.7	+14	31.6						
19	314	15.1	106	12.6	-19	00.6	168	51.8		31.5						
20	329	17.6	121	16.4	-18	59.8	183	53.9		31.4						
21	344	20.1	136	20.2		59.0	198	56.0		31.3						
22	359	22.5	151	24.0		58.2	213	58.1		31.2						
23	14	25.0	166	27.8		57.4	229	00.2		31.1						
24	29	27.5	181	31.6	-18	56.5	244	02.3	+14	31.0						
Dif	—		+38		+8		+11		+21		-1			+26		-1

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1 PMG: 11 ^h 44.6 ^m				Edad: 10.3 ^d SD: 15 ^h 1 PMG: 20 ^h 22 ^m								PHE { 4 ^h : 55 ^h 7 12 ^h : 55 ^h 9 20 ^h : 56 ^h 2 Rº: 45 ^m									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora	Rº			Hora	Rº								
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m		
0	183	49.3	-10	37.4	63	32.2	-14	05.3	128	60 N	16	34	17	17	18	05	15	30	2	0	02	91
1	198	49.4		38.3	78	05.4	-13	52.5	130	58	40		20		06		24	5		11	87	
2	213	49.5		39.2	92	38.7		39.5	130	56	45		23		06		19	8		19	83	
3	228	49.6		40.1	107	12.0		26.5	130	54	49		25		06		14	11		26	80	
4	243	49.7		41.0	121	45.3		13.5	130	52	53		28		07		10	13		32	78	
5	258	49.8	-10	41.9	136	18.6	-13	00.3	132	50	16	57	17	30	18	08	15	06	15	0	37	76
6	273	49.9	-10	42.7	150	51.9	-12	47.1	132	45	17	05	17	35	18	09	14	57	20	0	49	71
7	288	50.0		43.6	165	25.3		33.9	132	40	12		39		11		50	24	0	59	66	
8	303	50.1		44.5	179	58.7		20.5	134	35	18		44		13		43	28	1	08	62	
9	318	50.2		45.4	194	32.1	-12	07.1	134	30	23		47		15		38	30		15	59	
10	333	50.3		46.3	209	05.5	-11	53.7	134	20	32		17	55	20		28	36		28	54	
11	348	50.4	-10	47.2	223	38.9	-11	40.1	136	10 N	17	40	18	02	18	26	14	20	40	1	38	50
12	3	50.5	-10	48.1	238	12.4	-11	26.6	135	0	17	48	18	09	18	33	14	12	45	1	49	45
13	18	50.6		49.0	252	45.8	-11	12.9	137	10 S	17	56		17		42	14	03	50	1	59	41
14	33	50.7		49.8	267	19.3	-10	59.2	137	20	18	04	27		18	53	13	55	54	2	09	37
15	48	50.8		50.7	281	52.8		45.4	138	30	14		39		19	08	45	60		22	31	
16	63	50.9		51.6	296	26.3		31.6	138	35	20		46		17		39	63		29	28	
17	78	51.0	-10	52.5	310	59.8	-10	17.7	139	40	18	26	18	55	19	29	13	33	66	2	36	25
18	93	51.1	-10	53.4	325	33.3	-10	03.7	140	45	18	34	19	05	19	43	13	25	71	2	46	20
19	108	51.2		54.3	340	06.8	-9	49.7	140	50	43		18		20	01	16	76		2	57	16
20	123	51.3		55.2	354	40.3		35.6	141	52	47		24		09		11	79	3	02	13	
21	138	51.4		56.0	9	13.9		21.5	141	54	52		31		20		07	81		07	12	
22	153	51.5		56.9	23	47.4	-9	07.3	142	56	18	57	38		31		13	01	85		13	9
23	168	51.6		57.8	38	20.9	-8	53.0	143	58	19	03	47		20	45	12	56	87	20	6	
24	183	51.7	-10	58.7	52	54.5	-8	38.7	143	60 S	19	10	19	57	21	02	12	49	91	3	28	2
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 21 ^h 58.6 ^m		Mag: -4.2 PMG: 11 ^h 51 ^m				Mag: +1.0 PMG: 7 ^h 05 ^m				Mag: -2.0 PMG: 7 ^h 43 ^m				Mag: +0.4 PMG: 22 ^h 39 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	29	27.5	181	31.6	-18	56.5	253	40.9	+18	15.8	244	02.3	+14	31.0	19	10.3	+1	29.2				
1	44	29.9	196	35.3		55.7	268	42.0		15.4	259	04.4		30.8	34	12.9		29.1				
2	59	32.4	211	39.1		54.9	283	43.1		15.1	274	06.5		30.7	49	15.6		29.1				
3	74	34.8	226	42.9		54.1	298	44.2		14.8	289	08.7		30.6	64	18.2		29.0				
4	89	37.3	241	46.7		53.3	313	45.3		14.4	304	10.8		30.5	79	20.8		28.9				
5	104	39.8	256	50.5	-18	52.4	328	46.4	+18	14.1	319	12.9	+14	30.4	94	23.5	+1	28.9				
6	119	42.2	271	54.3	-18	51.6	343	47.5	+18	13.8	334	15.0	+14	30.3	109	26.1	+1	28.8				
7	134	44.7	286	58.1		50.8	358	48.6		13.4	349	17.1		30.2	124	28.7		28.7				
8	149	47.2	302	01.9		49.9	13	49.7		13.1	4	19.2		30.1	139	31.4		28.7				
9	164	49.6	317	05.7		49.1	28	50.8		12.8	19	21.3		30.0	154	34.0		28.6				
10	179	52.1	332	09.5		48.3	43	51.9		12.4	34	23.4		29.8	169	36.6		28.5				
11	194	54.6	347	13.3	-18	47.4	58	53.0	+18	12.1	49	25.5	+14	29.7	184	39.3	+1	28.5				
12	209	57.0	2	17.1	-18	46.6	73	54.1	+18	11.7	64	27.6	+14	29.6	199	41.9	+1	28.4				
13	224	59.5	17	20.9		45.8	88	55.2		11.4	79	29.7		29.5	214	44.5		28.3				
14	240	02.0	32	24.7		44.9	103	56.3		11.1	94	31.9		29.4	229	47.2		28.3				
15	255	04.4	47	28.5		44.1	118	57.4		10.7	109	34.0		29.3	244	49.8		28.2				
16	270	06.9	62	32.3		43.2	133	58.5		10.4	124	36.1		29.2	259	52.4		28.1				
17	285	09.3	77	36.1	-18	42.4	148	59.6	+18	10.1	139	38.2	+14	29.1	274	55.1	+1	28.1				
18	300	11.8	92	39.9	-18	41.5	164	00.8	+18	09.7	154	40.3	+14	29.0	289	57.7	+1	28.0				
19	315	14.3	107	43.7		40.7	179	01.9		09.4	169	42.4		28.9	305	00.3		27.9				
20	330	16.7	122	47.5		39.8	194	03.0		09.1	184	44.5		28.7	320	02.9		27.9				
21	345	19.2	137	51.3		39.0	209	04.1		08.7	199	46.6		28.6	335	05.6		27.8				
22	0	21.7	152	55.1		38.1	224	05.2		08.4	214	48.7		28.5	350	08.2		27.7				
23	15	24.1	167	58.9		37.3	239	06.3		08.0	229	50.9		28.4	5	10.8		27.7				
24	30	26.6	183	02.7	-18	36.4	254	07.4	+18	07.7	244	53.0	+14	28.3	20	13.5	+1	27.6				
Dif	—		+38		+8		+11		-3		+21		-1		+26		-1					

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG:11 ^h 44.5 ^m				Edad: 11.3 ^d PHE { 4 ^h : 56 ^h 4 12 ^h : 56 ^h 7 20 ^h : 57 ^h 0 R°: 44 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	51.7	-10	58.7	52	54.5	-8	38.7	60 N	5	25	6	57	15	31	0
1	198	51.8	-10	59.6	67	28.0 ¹⁴⁵		24.4 ¹⁴³	58	25	10	51	28	3	37	86
2	213	51.9	-11	00.5	82	01.6 ¹⁴⁶	-8	10.0 ¹⁴⁴	56	24	07	46	25	7	41	83
3	228	52.0		01.4	96	35.1 ¹⁴⁵	-7	55.5 ¹⁴⁵	54	24	05	41	23	9	45	80
4	243	52.1		02.2	111	08.7 ¹⁴⁶		41.0 ¹⁴⁵	52	23	02	37	21	12	48	78
5	258	52.2	-11	03.1	125	42.2 ¹⁴⁵	-7	26.5 ¹⁴⁵	50	5	22	6	00	6	33	15
6	273	52.3	-11	04.0	140	15.7 ¹⁴⁵	-7	11.9 ¹⁴⁶	45	5	21	5	55	6	25	15
7	288	52.4		04.9	154	49.3 ¹⁴⁶	-6	57.2 ¹⁴⁷	40	19	50	18	12	23	2	04
8	303	52.5		05.8	169	22.8 ¹⁴⁵		42.5 ¹⁴⁷	35	17	46	12	10	26	09	62
9	318	52.6		06.6	183	56.3 ¹⁴⁵		27.8 ¹⁴⁷	30	14	42	6	07	07	29	13
10	333	52.7		07.5	198	29.8 ¹⁴⁵	-6	13.0 ¹⁴⁸	20	09	35	5	57	15	03	35
11	348	52.8	-11	08.4	213	03.3 ¹⁴⁵	-5	58.1 ¹⁴⁹	10 N	5	03	5	28	5	49	14
12	3	52.9	-11	09.3	227	36.8 ¹⁴⁵	-5	43.3 ¹⁴⁸	0	4	56	5	20	5	41	14
13	18	52.9		10.2	242	10.3 ¹⁴⁵		28.3 ¹⁵⁰	10 S	47	12	33	52	49	38	40
14	33	53.0		11.1	256	43.7 ¹⁴⁴	-5	13.4 ¹⁴⁹	20	36	5	02	25	48	54	44
15	48	53.1		11.9	271	17.2 ¹⁴⁵	-4	58.4 ¹⁵⁰	30	21	4	50	15	43	60	51
16	63	53.2		12.8	285	50.6 ¹⁴⁴		43.3 ¹⁵¹	35	11	43	09	41	63	2	55
17	78	53.3	-11	13.7	300	24.0 ¹⁴⁴	-4	28.2 ¹⁵¹	40	4	00	4	34	5	02	14
18	93	53.4	-11	14.6	314	57.4 ¹⁴⁴	-4	13.1 ¹⁵¹	45	3	46	4	24	4	55	14
19	108	53.5		15.5	329	30.8 ¹⁴⁴	-3	58.0 ¹⁵¹	50	28	11	45	30	77	11	14
20	123	53.6		16.3	344	04.2 ¹⁴⁴		42.8 ¹⁵²	52	19	4	05	41	28	79	14
21	138	53.7		17.2	358	37.5 ¹⁴³		27.5 ¹⁵³	54	3	09	3	58	36	26	82
22	153	53.8		18.1	13	10.9 ¹⁴⁴	-3	12.3 ¹⁵²	56	2	57	50	31	24	85	21
23	168	53.9		19.0	27	44.2 ¹⁴³	-2	57.0 ¹⁵³	58	43	41	25	22	87	24	4
24	183	54.0	-11	19.8	42	17.4 ¹⁴²	-2	41.6 ¹⁵⁴	60 S	2	26	3	31	4	18	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 21 ^h 54.6 ^m		Mag: -4.2 PMG: 11 ^h 45 ^m		Mag: +1.0 PMG: 7 ^h 03 ^m		Mag: -2.0 PMG: 7 ^h 39 ^m		Mag: +0.4 PMG: 22 ^h 35 ^m		
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	30	26.6	183	02.7	-18	36.4	244	53.0	+14	28.3	
1	45	29.1	198	06.5		35.5	259	55.1		28.2	
2	60	31.5	213	10.3		34.7	274	57.2		28.1	
3	75	34.0	228	14.1		33.8	289	59.3		28.0	
4	90	36.5	243	17.9		32.9	305	01.4		27.9	
5	105	38.9	258	21.7	-18	32.1	320	03.5	+14	27.8	
6	120	41.4	273	25.5	-18	31.2	335	05.6	+14	27.6	
7	135	43.8	288	29.3		30.3	350	07.8		27.5	
8	150	46.3	303	33.1		29.4	5	09.9		27.4	
9	165	48.8	318	36.9		28.6	20	12.0		27.3	
10	180	51.2	333	40.7		27.7	35	14.1		27.2	
11	195	53.7	348	44.5	-18	26.8	50	16.2	+14	27.1	
12	210	56.2	3	48.3	-18	25.9	65	18.3	+14	27.0	
13	225	58.6	18	52.1		25.0	80	20.4		26.9	
14	241	01.1	33	55.9		24.2	95	22.6		26.8	
15	256	03.6	48	59.7		23.3	110	24.7		26.7	
16	271	06.0	64	03.5		22.4	125	26.8		26.6	
17	286	08.5	79	07.3	-18	21.5	140	28.9	+14	26.4	
18	301	10.9	94	11.2	-18	20.6	155	31.0	+14	26.3	
19	316	13.4	109	15.0		19.7	170	33.1		26.2	
20	331	15.9	124	18.8		18.8	185	35.3		26.1	
21	346	18.3	139	22.6		17.9	200	37.4		26.0	
22	1	20.8	154	26.4		17.0	215	39.5		25.9	
23	16	23.3	169	30.2		16.1	230	41.6		25.8	
24	31	25.7	184	34.0	-18	15.2	245	43.7	+14	25.7	
Dif	—		+38		+9		+11		+21		-1
											+26
											-1

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG:11 ^h 44.3 ^m			Edad: 12.3 ^d PHE { 4 ^h : 57/2 12 ^h : 57/5 20 ^h : 57/8 R ^o : 49 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R ^o	Hora	R ^o
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	m	h m	m	h m	m
0	183	54.0	-11	19.8	42	17.4	-2	41.6	60 N	16 28	17 12	18 00	15 31	1	3 02	94	
1	198	54.1		20.7	56	50.7 ¹⁴³		26.3 ¹⁵³	58	35	15	01	31	5	03	91	
2	213	54.1		21.6	71	23.9 ¹⁴²	-2	10.9 ¹⁵⁴	56	40	18	02	32	8	04	87	
3	228	54.2		22.5	85	57.1 ¹⁴²	-1	55.5 ¹⁵⁴	54	45	21	02	32	11	05	84	
4	243	54.3		23.3	100	30.3 ¹⁴²		40.0 ¹⁵⁵	52	49	24	03	33	13	06	81	
5	258	54.4	-11	24.2	115	03.4 ¹⁴¹	-1	24.6 ¹⁵⁴	50	16 53	17 26	18 04	15 33	16	3 07	79	
6	273	54.5	-11	25.1	129	36.5 ¹⁴¹	-1	09.1 ¹⁵⁵	45	17 02	17 32	18 06	15 34	21	3 08	74	
7	288	54.6		26.0	144	09.6 ¹⁴¹	-0	53.5 ¹⁵⁵	40	09	37	08	35	25	09	70	
8	303	54.7		26.8	158	42.7 ¹⁴¹		38.0 ¹⁵⁵	35	15	41	11	36	29	11	65	
9	318	54.8		27.7	173	15.7 ¹⁴⁰		22.4 ¹⁵⁶	30	21	45	13	36	33	12	62	
10	333	54.8		28.6	187	48.6 ¹³⁹	-0	06.8 ¹⁵⁶	20	31	17 53	19	38	37	13	57	
11	348	54.9	-11	29.5	202	21.6 ¹⁴⁰	+0	08.8 ¹⁵⁶	10 N	17 39	18 01	18 26	15 39	42	3 15	51	
12	3	55.0	-11	30.3	216	54.5 ¹³⁹	+0	24.4 ¹⁵⁶	0	17 48	18 09	18 33	15 40	47	3 16	47	
13	18	55.1		31.2	231	27.3 ¹³⁸		40.0 ¹⁵⁶	10 S	17 56	18	43	41	52	18	41	
14	33	55.2		32.1	246	00.1 ¹³⁸	+0	55.7 ¹⁵⁷	20	18 05	28	18 54	42	57	19	37	
15	48	55.3		33.0	260	32.9 ¹³⁸	+1	11.4 ¹⁵⁷	30	15	40	19 10	43	63	20	32	
16	63	55.4		33.8	275	05.6 ¹³⁷		27.1 ¹⁵⁷	35	22	48	19	44	67	21	28	
17	78	55.5	-11	34.7	289	38.3 ¹³⁷	+1	42.8 ¹⁵⁷	40	18 28	18 57	19 31	15 44	71	3 22	25	
18	93	55.5	-11	35.6	304	11.0 ¹³⁷	+1	58.5 ¹⁵⁷	45	18 37	19 08	19 46	15 45	76	3 23	21	
19	108	55.6		36.5	318	43.6 ¹³⁶	+2	14.2 ¹⁵⁷	50	46	21	20 05	47	81	25	15	
20	123	55.7		37.3	333	16.1 ¹³⁵		30.0 ¹⁵⁸	52	51	28	14	47	84	25	13	
21	138	55.8		38.2	347	48.6 ¹³⁵	+2	45.7 ¹⁵⁷	54	18 56	35	25	48	86	26	11	
22	153	55.9		39.1	2	21.1 ¹³⁵	+3	01.5 ¹⁵⁷	56	19 02	43	37	49	89	27	8	
23	168	56.0		39.9	16	53.5 ¹³⁴		17.2 ¹⁵⁸	58	08	19 52	20 52	49	93	28	4	
24	183	56.0	-11	40.8	31	25.8 ¹³³	+3	33.0 ¹⁵⁸	60 S	19 15	20 03	21 10	15 50	97	3 29	1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 50.7 ^m		Mag: -4.2 PMG: 11 ^h 39 ^m		Mag: +1.0 PMG: 7 ^h 01 ^m		Mag: -2.0 PMG: 7 ^h 36 ^m		Mag: +0.4 PMG: 22 ^h 31 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	31	25.7	184	34.0	-18	15.2	254	43.7	+14	25.7
1	46	28.2	199	37.8		14.3	260	45.8		25.6
2	61	30.7	214	41.6		13.4	275	48.0		25.5
3	76	33.1	229	45.4		12.5	290	50.1		25.4
4	91	35.6	244	49.2		11.6	305	52.2		25.2
5	106	38.1	259	53.0	-18	10.7	320	54.3	+14	25.1
6	121	40.5	274	56.8	-18	09.8	335	56.4	+14	25.0
7	136	43.0	290	00.6		08.9	350	58.6		24.9
8	151	45.4	305	04.4		08.0	6	00.7		24.8
9	166	47.9	320	08.2		07.0	21	02.8		24.7
10	181	50.4	335	12.0		06.1	36	04.9		24.6
11	196	52.8	350	15.8	-18	05.2	51	07.0	+14	24.5
12	211	55.3	5	19.6	-18	04.3	66	09.2	+14	24.4
13	226	57.8	20	23.4		03.4	81	11.3		24.3
14	242	00.2	35	27.2		02.4	96	13.4		24.2
15	257	02.7	50	31.0		01.5	111	15.5		24.1
16	272	05.2	65	34.8	-18	00.6	126	17.6		24.0
17	287	07.6	80	38.6	-17	59.7	141	19.8	+14	23.8
18	302	10.1	95	42.4	-17	58.7	156	21.9	+14	23.7
19	317	12.5	110	46.2		57.8	171	24.0		23.6
20	332	15.0	125	50.0		56.9	186	26.1		23.5
21	347	17.5	140	53.8		55.9	201	28.2		23.4
22	2	19.9	155	57.6		55.0	216	30.4		23.3
23	17	22.4	171	01.4		54.1	231	32.5		23.2
24	32	24.9	186	05.2	-17	53.1	246	34.6	+14	23.1
Dif	—		+38	+9		+11	-3	+21		-1
										+26
										-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 44.2 ^m			Edad: 13.3 ^d PHE { 4 ^h : 58'0 12 ^h : 58'3 20 ^h : 58'6 Rº: 50 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	56.0	-11	40.8	31	25.8	+3	33.0	60 N	5	30	6	18	7	02	15	31
1	198	56.1		41.7	45	58.1 ¹³³	+3	48.7 ¹⁵⁷	58	29		15	6	55	35	5	32
2	213	56.2		42.5	60	30.3 ¹³²	+4	04.5 ¹⁵⁸	56	28		11	50	39	8	30	90
3	228	56.3		43.4	75	02.5 ¹³²		20.3 ¹⁵⁸	54	27		08	45	42	12	28	86
4	243	56.4		44.3	89	34.6 ¹³¹		36.0 ¹⁵⁷	52	26		06	40	45	14	26	84
5	258	56.5	-11	45.2	104	06.7 ¹³¹	+4	51.8 ¹⁵⁸	50	5	25	6	03	6	36	15	48
6	273	56.5	-11	46.0	118	38.7 ¹³⁰	+5	07.5 ¹⁵⁷	45	5	23	5	57	6	27	15	54
7	288	56.6		46.9	133	10.6 ¹²⁹		23.3 ¹⁵⁸	40	21		52	20	15	59	27	70
8	303	56.7		47.8	147	42.5 ¹²⁹		39.0 ¹⁵⁷	35	18		48	14	16	03	31	15
9	318	56.8		48.6	162	14.3 ¹²⁸	+5	54.8 ¹⁵⁸	30	15		44	6	08	07	34	12
10	333	56.9		49.5	176	46.0 ¹²⁷	+6	10.5 ¹⁵⁷	20	10		36	5	58	14	39	08
11	348	56.9	-11	50.4	191	17.7 ¹²⁷	+6	26.2 ¹⁵⁷	10 N	5	03	5	28	5	49	16	20
12	3	57.0	-11	51.2	205	49.3 ¹²⁶	+6	41.9 ¹⁵⁷	0	4	55	5	20	5	41	16	26
13	18	57.1		52.1	220	20.8 ¹²⁵	+6	57.6 ¹⁵⁷	10 S	46		11	32	32	54	3	58
14	33	57.2		53.0	234	52.3 ¹²⁵	+7	13.3 ¹⁵⁷	20	34		5	01	23	38	59	54
15	48	57.3		53.8	249	23.7 ¹²⁴		28.9 ¹⁵⁶	30	19		4	48	13	45	65	50
16	63	57.3		54.7	263	55.0 ¹²³	+7	44.6 ¹⁵⁷	35	4	09	40	5	07	49	69	48
17	78	57.4	-11	55.6	278	26.3 ¹²³	+8	00.2 ¹⁵⁶	40	3	57	4	31	4	59	16	54
18	93	57.5	-11	56.4	292	57.4 ¹²¹	+8	15.8 ¹⁵⁶	45	3	42	4	20	4	51	16	59
19	108	57.6		57.3	307	28.5 ¹²¹		31.3 ¹⁵⁵	50	23		06	41	17	06	84	39
20	123	57.6		58.1	321	59.6 ¹²¹	+8	46.9 ¹⁵⁶	52	14		4	00	37	09	86	37
21	138	57.7		59.0	336	30.5 ¹¹⁹	+9	02.4 ¹⁵⁵	54	3	03	3	53	32	13	89	35
22	153	57.8	-11	59.9	351	01.4 ¹¹⁹		17.9 ¹⁵⁵	56	2	51	45	26	16	93	33	8
23	168	57.9	-12	00.7	5	32.1 ¹¹⁷		33.3 ¹⁵⁴	58	36		35	20	21	96	31	4
24	183	58.0	-12	01.6	20	02.8 ¹¹⁷	+9	48.8 ¹⁵⁵	60 S	2	18	3	24	4	12	17	25

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 46.8 ^m		Mag: -4.2 PMG: 11 ^h 33 ^m		Mag: +1.0 PMG: 6 ^h 59 ^m		Mag: -2.0 PMG: 7 ^h 33 ^m		Mag: +0.4 PMG: 22 ^h 27 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	32	24.9	186	05.2	-17	53.1	255	00.9	+17	51.5	246	34.6	+14	23.1	22	19.7	+1	24.4
1	47	27.3	201	09.0		52.2	270	02.1		51.2	261	36.7		23.0	37	22.3		24.3
2	62	29.8	216	12.8		51.3	285	03.2		50.8	276	38.9		22.9	52	24.9		24.3
3	77	32.3	231	16.6		50.3	300	04.3		50.5	291	41.0		22.8	67	27.6		24.2
4	92	34.7	246	20.4		49.4	315	05.4		50.1	306	43.1		22.7	82	30.2		24.1
5	107	37.2	261	24.2	-17	48.4	330	06.6	+17	49.8	321	45.2	+14	22.6	97	32.8	+1	24.1
6	122	39.7	276	28.0	-17	47.5	345	07.7	+17	49.5	336	47.3	+14	22.5	112	35.5	+1	24.0
7	137	42.1	291	31.8		46.5	0	08.8		49.1	351	49.5		22.4	127	38.1		23.9
8	152	44.6	306	35.6		45.6	15	09.9		48.8	6	51.6		22.2	142	40.7		23.9
9	167	47.0	321	39.4		44.6	30	11.1		48.4	21	53.7		22.1	157	43.3		23.8
10	182	49.5	336	43.2		43.7	45	12.2		48.1	36	55.8		22.0	172	46.0		23.7
11	197	52.0	351	47.0	-17	42.7	60	13.3	+17	47.8	51	58.0	+14	21.9	187	48.6	+1	23.7
12	212	54.4	6	50.8	-17	41.8	75	14.5	+17	47.4	67	00.1	+14	21.8	202	51.2	+1	23.6
13	227	56.9	21	54.6		40.8	90	15.6		47.1	82	02.2		21.7	217	53.8		23.6
14	242	59.4	36	58.4		39.9	105	16.7		46.7	97	04.3		21.6	232	56.5		23.5
15	258	01.8	52	02.1		38.9	120	17.8		46.4	112	06.5		21.5	247	59.1		23.4
16	273	04.3	67	05.9		38.0	135	19.0		46.1	127	08.6		21.4	263	01.7		23.4
17	288	06.8	82	09.7	-17	37.0	150	20.1	+17	45.7	142	10.7	+14	21.3	278	04.4	+1	23.3
18	303	09.2	97	13.5	-17	36.0	165	21.2	+17	45.4	157	12.9	+14	21.2	293	07.0	+1	23.2
19	318	11.7	112	17.3		35.1	180	22.4		45.0	172	15.0		21.1	308	09.6		23.2
20	333	14.1	127	21.1		34.1	195	23.5		44.7	187	17.1		21.0	323	12.2		23.1
21	348	16.6	142	24.9		33.2	210	24.6		44.4	202	19.2		20.9	338	14.9		23.0
22	3	19.1	157	28.6		32.2	225	25.8		44.0	217	21.4		20.8	353	17.5		23.0
23	18	21.5	172	32.4		31.2	240	26.9		43.7	232	23.5		20.7	8	20.1		22.9
24	33	24.0	187	36.2	-17	30.3	255	28.0	+17	43.3	247	25.6	+14	20.6	23	22.7	+1	22.8
Dif	—		+38		+10		+11		-3		+21		-1		+26		-	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^l PMG: 11 ^h 44.1 ^m				Edad: 14.3 ^d PHE { 4 ^h : 58'8 12 ^h : 59'0 20 ^h : 59'2 R°: 57 ^m													
	hG ☉	Dec			hG ☾	Dif			Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	183	58.0	-12	01.6	20	02.8		+9	48.8	154	60 N	16 23	17 07	17 55	15 32	5	6 13	106
1	198	58.0		02.5	34	33.4		+10	04.2	153	58	29	10	56	40	10		06 101
2	213	58.1		03.3	49	04.0			19.5	154	56	35	14	57	47	14	6	00 96
3	228	58.2		04.2	63	34.4			34.9	154	54	40	17	58	54	17	5	54 93
4	243	58.3		05.0	78	04.8		+10	50.1	152	52	45	20	17 59	15 59	20		50 89
5	258	58.3	-12	05.9	92	35.0		+11	05.4	153	50	16 49	17 23	18 00	16 05	22	5	45 87
6	273	58.4	-12	06.8	107	05.2		+11	20.6	152	45	16 59	17 29	18 03	16 16	28	5	36 81
7	288	58.5		07.6	121	35.3			35.7	151	40	17 07	34	06	26	32		28 76
8	303	58.6		08.5	136	05.3		+11	50.9	152	35	13	39	09	34	36		21 72
9	318	58.6		09.3	150	35.2		+12	05.9	150	30	19	44	12	41	40		16 68
10	333	58.7		10.2	165	05.0			20.9	150	20	30	17 52	18	16 53	46	5	06 62
11	348	58.8	-12	11.1	179	34.7		+12	35.9	150	10 N	17 39	18 00	18 25	17 05	50	4	57 57
12	3	58.8	-12	11.9	194	04.3		+12	50.8	149	0	17 47	18 09	18 33	17 15	55	4	49 52
13	18	58.9		12.8	208	33.9		+13	05.7	149	10 S	17 56	18	43	26	59		41 48
14	33	59.0		13.6	223	03.3			20.5	148	20	18 06	29	18 55	37	65		32 43
15	48	59.1		14.5	237	32.6			35.2	147	30	17	42	19 11	50	71		22 37
16	63	59.1		15.4	252	01.8		+13	49.9	147	35	23	50	21	17 58	74		16 34
17	78	59.2	-12	16.2	266	31.0		+14	04.6	147	40	18 31	18 59	19 34	18 07	77	4	10 30
18	93	59.3	-12	17.1	281	00.0		+14	19.1	145	45	18 39	19 11	19 49	18 17	83	4	03 25
19	108	59.3		17.9	295	28.9			33.6	145	50	50	25	20 09	30	88	3	54 20
20	123	59.4		18.8	309	57.7		+14	48.0	144	52	18 55	32	19	35	92	50	17
21	138	59.5		19.6	324	26.4		+15	02.4	144	54	19 00	39	30	42	95	45	15
22	153	59.6		20.5	338	55.0			16.7	143	56	06	48	43	49	100	41	11
23	168	59.6		21.3	353	23.5			30.9	142	58	13	19 58	20 59	18 57	105	35	7
24	183	59.7	-12	22.2	7	51.9		+15	45.0	141	60 S	19 20	20 09	21 18	19 07	110	3	29 3
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 42.8 ^m		Mag: -4.2 PMG: 11 ^h 27 ^m			Mag: +0.9 PMG: 6 ^h 58 ^m			Mag: -2.0 PMG: 7 ^h 29 ^m			Mag: +0.4 PMG: 22 ^h 23 ^m						
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	33	24.0	187	36.2	-17 30.3	255	28.0	+17 43.3	247	25.6	+14 20.6	23	22.7	+1 22.8				
1	48	26.5	202	40.0	29.3	270	29.2	43.0	262	27.7	20.4	38	25.4	22.8				
2	63	28.9	217	43.8	28.3	285	30.3	42.7	277	29.9	20.3	53	28.0	22.7				
3	78	31.4	232	47.6	27.4	300	31.4	42.3	292	32.0	20.2	68	30.6	22.7				
4	93	33.9	247	51.3	26.4	315	32.6	42.0	307	34.1	20.1	83	33.2	22.6				
5	108	36.3	262	55.1	-17 25.4	330	33.7	+17 41.6	322	36.3	+14 20.0	98	35.9	+1 22.5				
6	123	38.8	277	58.9	-17 24.4	345	34.8	+17 41.3	337	38.4	+14 19.9	113	38.5	+1 22.5				
7	138	41.3	293	02.7	23.5	0 36.0	41.0		352	40.5	19.8	128	41.1	22.4				
8	153	43.7	308	06.4	22.5	15 37.1	40.6		7 42.6	19.7		143	43.7	22.3				
9	168	46.2	323	10.2	21.5	30 38.2	40.3		22 44.8	19.6		158	46.4	22.3				
10	183	48.6	338	14.0	20.5	45 39.4	39.9		37 46.9	19.5		173	49.0	22.2				
11	198	51.1	353	17.7	-17 19.6	60 40.5	+17 39.6		52 49.0	+14 19.4		188	51.6	+1 22.1				
12	213	53.6	8 21.5	-17 18.6		75 41.7	+17 39.3		67 51.2	+14 19.3		203	54.2	+1 22.1				
13	228	56.0	23 25.3	17.6		90 42.8	38.9		82 53.3	19.2		218	56.9	22.0				
14	243	58.5	38 29.1	16.6		105 43.9	38.6		97 55.4	19.1		233	59.5	21.9				
15	259	01.0	53 32.8	15.6		120 45.1	38.2		112 57.6	19.0		249	02.1	21.9				
16	274	03.4	68 36.6	14.6		135 46.2	37.9		127 59.7	18.9		264	04.7	21.8				
17	289	05.9	83 40.4	-17 13.7		150 47.3	+17 37.6		143 01.8	+14 18.8		279	07.4	+1 21.8				
18	304	08.4	98 44.1	-17 12.7		165 48.5	+17 37.2		158 03.9	+14 18.7		294	10.0	+1 21.7				
19	319	10.8	113 47.9	11.7		180 49.6	36.9		173 06.1	18.6		309	12.6	21.6				
20	334	13.3	128 51.6	10.7		195 50.8	36.5		188 08.2	18.5		324	15.2	21.6				
21	349	15.8	143 55.4	09.7		210 51.9	36.2		203 10.3	18.4		339	17.9	21.5				
22	4	18.2	158 59.2	08.7		225 53.1	35.9		218 12.5	18.3		354	20.5	21.4				
23	19	20.7	174 02.9	07.7		240 54.2	35.5		233 14.6	18.2		9	23.1	21.4				
24	34	23.1	189 06.7	-17 06.7		255 55.3	+17 35.2		248 16.7	+14 18.0		24	25.7	+1 21.3				
Dif	—		+38		+10	+11		-3	+21		-1	+26		-1				

UT	SOL				LUNA								Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1 PMG: 11 ^h 44.0 ^m				Edad: 15.3 ^d PHE { 4 ^h : 59'4 12 ^h : 59'6 20 ^h : 59'8 R°: *** ^m																			
	hG ☉		Dec		hG ☾		Dif		Dec		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m					
0	183	59.7	-12	22.2	7	51.9	+15	45.0	141	59.1	141	59.1	5	34	6	23	7	07	15	35	7	7	57	111
1	198	59.8		23.1	22	20.2	+15	59.1	140	58	140	58	33	19	7	00	48	14	45	105				
2	213	59.8		23.9	36	48.4	+16	13.1	139	56	139	56	32	15	6	54	15	59	19	35	99			
3	228	59.9		24.8	51	16.5		27.0	138	54	138	54	31	12		49	16	09	23	26	95			
4	244	00.0		25.6	65	44.4		40.8	137	52	137	52	29	09		44	18	26	18	91				
5	259	00.0	-12	26.5	80	12.3	+16	54.5	137	50	137	50	5	28	6	06	6	40	16	26	29	7	10	89
6	274	00.1	-12	27.3	94	40.0	+17	08.2	135	45	135	45	5	26	6	00	6	30	16	43	35	6	55	82
7	289	00.2		28.2	109	07.7		21.7	135	40	135	40	23	5	54	22	16	57	39	43	77			
8	304	00.2		29.0	123	35.2		35.2	134	35	134	35	20	49		15	17	09	43	32	73			
9	319	00.3		29.9	138	02.6	+17	48.6	132	30	132	30	17	45	6	09	20	45	23	70				
10	334	00.4		30.7	152	29.9	+18	01.8	132	20	132	20	10	36	5	59	38	50	6	07	65			
11	349	00.4	-12	31.6	166	57.1	+18	15.0	131	10	131	10	5	03	5	28	5	49	17	54	54	5	53	60
12	4	00.5	-12	32.4	181	24.1	+18	28.1	130	0	130	0	4	55	5	19	5	41	18	09	58	5	40	56
13	19	00.6		33.3	195	51.1		41.1	129	10	129	10	45	5	10	32	24	62	27	52				
14	34	00.6		34.1	210	17.9	+18	54.0	127	20	127	20	33	4	59	22	40	67	5	13	48			
15	49	00.7		35.0	224	44.7	+19	06.7	127	30	127	30	16	46		11	18	59	72	4	58	42		
16	64	00.7		35.8	239	11.3		19.4	125	35	125	35	4	06	38	5	04	19	10	75	49	38		
17	79	00.8	-12	36.7	253	37.8	+19	31.9	125	40	125	40	3	54	4	28	4	57	19	23	78	4	39	34
18	94	00.9	-12	37.5	268	04.1	+19	44.4	123	45	123	45	3	38	4	17	4	48	19	38	83	4	27	30
19	109	00.9		38.4	282	30.4	+19	56.7	122	50	122	50	18	4	02	38	19	57	88	12	25			
20	124	01.0		39.2	296	56.6	+20	08.9	121	52	121	52	3	09	3	56	33	20	06	92	4	06	21	
21	139	01.1		40.1	311	22.6		21.0	120	54	120	54	2	57	48	27	16	95	3	58	19			
22	154	01.1		40.9	325	48.5		33.0	118	56	118	56	44	39		21	27	100	50	14				
23	169	01.2		41.8	340	14.3		44.8	118	58	118	58	28	29		14	40	106	41	10				
24	184	01.2	-12	42.6	354	40.0	+20	56.6	118	60	118	60	2	09	3	18	4	07	20	56	114	3	30	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 38.9 ^m		Mag: -4.2 PMG: 11 ^h 21 ^m		Mag: +0.9 PMG: 6 ^h 56 ^m		Mag: -2.0 PMG: 7 ^h 26 ^m		Mag: +0.4 PMG: 22 ^h 18 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	34	23.1	189	06.7	-17	06.7	255	55.3	+17	35.2	248	16.7	+14	18.0	24	25.7	+1	21.3
1	49	25.6	204	10.4		05.7	270	56.5		34.8	263	18.9		17.9	39	28.4		21.2
2	64	28.1	219	14.2		04.7	285	57.6		34.5	278	21.0		17.8	54	31.0		21.2
3	79	30.5	234	17.9		03.8	300	58.8		34.2	293	23.1		17.7	69	33.6		21.1
4	94	33.0	249	21.7		02.8	315	59.9		33.8	308	25.3		17.6	84	36.2		21.1
5	109	35.5	264	25.4	-17	01.8	331	01.1	+17	33.5	323	27.4	+14	17.5	99	38.9	+1	21.0
6	124	37.9	279	29.2	-17	00.8	346	02.2	+17	33.1	338	29.5	+14	17.4	114	41.5	+1	20.9
7	139	40.4	294	32.9	-16	59.8	1	03.3		32.8	353	31.7		17.3	129	44.1		20.9
8	154	42.9	309	36.7		58.8	16	04.5		32.5	8	33.8		17.2	144	46.7		20.8
9	169	45.3	324	40.4		57.8	31	05.6		32.1	23	35.9		17.1	159	49.4		20.7
10	184	47.8	339	44.2		56.8	46	06.8		31.8	38	38.1		17.0	174	52.0		20.7
11	199	50.2	354	47.9	-16	55.8	61	07.9	+17	31.4	53	40.2	+14	16.9	189	54.6	+1	20.6
12	214	52.7	9	51.6	-16	54.8	76	09.1	+17	31.1	68	42.4	+14	16.8	204	57.2	+1	20.6
13	229	55.2	24	55.4		53.8	91	10.2		30.7	83	44.5		16.7	219	59.9		20.5
14	244	57.6	39	59.1		52.8	106	11.4		30.4	98	46.6		16.6	235	02.5		20.4
15	260	00.1	55	02.8		51.8	121	12.5		30.1	113	48.8		16.5	250	05.1		20.4
16	275	02.6	70	06.6		50.7	136	13.7		29.7	128	50.9		16.4	265	07.7		20.3
17	290	05.0	85	10.3	-16	49.7	151	14.8	+17	29.4	143	53.0	+14	16.3	280	10.3	+1	20.2
18	305	07.5	100	14.0	-16	48.7	166	16.0	+17	29.0	158	55.2	+14	16.2	295	13.0	+1	20.2
19	320	10.0	115	17.8		47.7	181	17.1		28.7	173	57.3		16.1	310	15.6		20.1
20	335	12.4	130	21.5		46.7	196	18.3		28.4	188	59.4		16.0	325	18.2		20.1
21	350	14.9	145	25.2		45.7	211	19.4		28.0	204	01.6		15.9	340	20.8		20.0
22	5	17.4	160	28.9		44.7	226	20.6		27.7	219	03.7		15.8	355	23.5		19.9
23	20	19.8	175	32.7		43.7	241	21.7		27.3	234	05.9		15.7	10	26.1		19.9
24	35	22.3	190	36.4	-16	42.7	256	22.9	+17	27.0	249	08.0	+14	15.6	25	28.7	+1	19.8
Dif	—		+37		+10		+11		-3		+21		-1		+26		-	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 11 ^h 43.9 ^m				Edad: 16.3 ^d PHE { 4 ^h : 59 ^h 9 12 ^h : 60 ^h 0 20 ^h : 60 ^h 1 Rº: 61 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora	Rº			Hora	Rº				
h	° /	° /	° /		° /		°		h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
0	184	01.2	-12	42.6	354	40.0	66	+20	56.6	116	60 N	16 17	17 01	17 50	15 42	19	9 48	114
1	199	01.3		43.5	9	05.6	65	+21	08.2	114	58	24	06	52	16 02	27	30	104
2	214	01.4		44.3	23	31.1	63		19.6	114	56	31	10	53	18 32		14	99
3	229	01.4		45.2	37	56.4	62		31.0	114	54	36	13	54	32 36		9 01	94
4	244	01.5		46.0	52	21.6	62		42.2	112	52	41	16	56	44 40		8 49	91
5	259	01.5	-12	46.8	66	46.8	62	+21	53.3	111	50	16 46	17 19	17 57	16 55	42	8 39	88
6	274	01.6	-12	47.7	81	11.8	60	+22	04.2	109	45	16 56	17 26	18 00	17 18	47	8 17	83
7	289	01.7		48.5	95	36.7	59		15.0	108	40	17 04	32	03	36 50		8 00	79
8	304	01.7		49.4	110	01.4	57		25.7	107	35	11	37	07	17 52	53	7 45	76
9	319	01.8		50.2	124	26.1	57		36.2	105	30	17	42	10	18 05	55	33	73
10	334	01.8		51.1	138	50.7	56		46.5	103	20	28	17 51	17	28 59		7 12	69
11	349	01.9	-12	51.9	153	15.1	54	+22	56.8	103	10 N	17 38	18 00	18 24	18 48	62	6 53	66
12	4	02.0	-12	52.8	167	39.5	54	+23	06.9	101	0	17 47	18 08	18 33	19 07	64	6 36	62
13	19	02.0		53.6	182	03.7	52		16.8	99	0 S	17 57	18	43	26 67		19	59
14	34	02.1		54.4	196	27.8	51		26.6	98	20	18 07	30	18 56	19 47	69	6 01	55
15	49	02.1		55.3	210	51.9	51		36.2	96	30	18	43	19 13	20 11	72	5 40	50
16	64	02.2		56.1	225	15.8	49		45.7	95	35	25	18 52	24	25 74		27	49
17	79	02.2	-12	57.0	239	39.6	48	+23	55.0	93	40	18 33	19 02	19 37	20 41	77	5 13	45
18	94	02.3	-12	57.8	254	03.3	47	+24	04.1	91	45	18 42	19 14	19 53	21 01	80	4 57	41
19	109	02.3		58.6	268	26.9	46		13.1	90	50	53	29	20 13	25 85		37	35
20	124	02.4	-12	59.5	282	50.4	45		21.9	88	52	18 58	36	24	38 86		27	33
21	139	02.5	-13	00.3	297	13.8	44		30.6	87	54	19 04	44	35	21 51	90	17	29
22	154	02.5		01.2	311	37.2	44		39.1	85	56	10	19 53	20 49	22 07	94	4 04	25
23	169	02.6		02.0	326	00.4	42		47.4	83	58	17	20 03	21 06	26 100		3 51	18
24	184	02.6	-13	02.8	340	23.5	41	+24	55.6	82	60 S	19 26	20 15	21 27	22 50	109	3 34	11
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG		Mag: -4.3		Mag: +0.9		Mag: -2.0		Mag: +0.4									
	21 ^h 35.0 ^m		PMG: 11 ^h 15 ^m		PMG: 6 ^h 54 ^m		PMG: 7 ^h 22 ^m		PMG: 22 ^h 14 ^m									
	hG ♈	Dec	hG ♊	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	° /	° /	° /		° /		° /		° /		° /							
0	35	22.3	190	36.4	-16	42.7	256	22.9	+17	27.0	249	08.0	+14	15.6	25	28.7	+1	19.8
1	50	24.7	205	40.1		41.7	271	24.0		26.7	264	10.1		15.5	40	31.3		19.7
2	65	27.2	220	43.8		40.7	286	25.2		26.3	279	12.3		15.4	55	33.9		19.7
3	80	29.7	235	47.5		39.6	301	26.3		26.0	294	14.4		15.3	70	36.6		19.6
4	95	32.1	250	51.3		38.6	316	27.5		25.6	309	16.6		15.2	85	39.2		19.6
5	110	34.6	265	55.0	-16	37.6	331	28.6	+17	25.3	324	18.7	+14	15.1	100	41.8	+1	19.5
6	125	37.1	280	58.7	-16	36.6	346	29.8	+17	24.9	339	20.8	+14	15.0	115	44.4	+1	19.4
7	140	39.5	296	02.4		35.6	1	30.9		24.6	354	23.0		14.9	130	47.1		19.4
8	155	42.0	311	06.1		34.6	16	32.1		24.3	9	25.1		14.8	145	49.7		19.3
9	170	44.5	326	09.8		33.6	31	33.2		23.9	24	27.3		14.7	160	52.3		19.2
10	185	46.9	341	13.5		32.5	46	34.4		23.6	39	29.4		14.6	175	54.9		19.2
11	200	49.4	356	17.2	-16	31.5	61	35.5	+17	23.2	54	31.5	+14	14.5	190	57.5	+1	19.1
12	215	51.9	11	20.9	-16	30.5	76	36.7	+17	22.9	69	33.7	+14	14.4	206	00.2	+1	19.1
13	230	54.3	26	24.6		29.5	91	37.9		22.6	84	35.8		14.3	221	02.8		19.0
14	245	56.8	41	28.3		28.5	106	39.0		22.2	99	38.0		14.2	236	05.4		18.9
15	260	59.2	56	32.0		27.5	121	40.2		21.9	114	40.1		14.1	251	08.0		18.9
16	276	01.7	71	35.7		26.4	136	41.3		21.5	129	42.2		14.0	266	10.6		18.8
17	291	04.2	86	39.4	-16	25.4	151	42.5	+17	21.2	144	44.4	+14	13.9	281	13.3	+1	18.8
18	306	06.6	101	43.1	-16	24.4	166	43.6	+17	20.8	159	46.5	+14	13.8	296	15.9	+1	18.7
19	321	09.1	116	46.7		23.4	181	44.8		20.5	174	48.7		13.7	311	18.5		18.6
20	336	11.6	131	50.4		22.3	196	46.0		20.2	189	50.8		13.6	326	21.1		18.6
21	351	14.0	146	54.1		21.3	211	47.1		19.8	204	53.0		13.5	341	23.7		18.5
22	6	16.5	161	57.8		20.3	226	48.3		19.5	219	55.1		13.4	356	26.4		18.4
23	21	19.0	177	01.5		19.3	241	49.4		19.1	234	57.2		13.3	11	29.0		18.4
24	36	21.4	192	05.1	-16	18.3	256	50.6	+17	18.8	249	59.4	+14	13.1	26	31.6	+1	18.3
Dif	—		+37		+10		+12		-3		+21		-1		+26		-	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 16'1 PMG:11 ^h 43.8 ^m				Edad: 17.3 ^d PHE { 4 ^h : 60'1 12 ^h : 60'2 20 ^h : 60'2 PMG: 1 ^h 22 ^m R°: 63 ^m																		
	hG ☉		Dec		hG ☾		Dif		Dec			Dif		Náutico	Civil	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m			
0	184	02.6	-13	02.8	340	23.5	40	+24	55.6	80	60 N	5	39	6	28	7	12	15	59	43	11	40	93
1	199	02.7		03.7	354	46.5	40	+25	03.6	78	58	37	23	7	05	16	27	49	11	13	86		
2	214	02.7		04.5	9	09.5	40		11.4	76	56	36	19	6	58	16	49	52	10	51	83		
3	229	02.8		05.4	23	32.3	38		19.0	75	54	34	16	53	17	07	54		33	80			
4	244	02.8		06.2	37	55.1	38		26.5	75	52	33	12	48	22	56		18	79				
5	259	02.9	-13	07.0	52	17.7	36	+25	33.8	73	50	5	31	6	09	6	43	17	36	57	10	05	77
6	274	02.9	-13	07.9	66	40.3	36	+25	40.9	71	45	5	28	6	03	6	33	18	03	59	9	39	74
7	289	03.0		08.7	81	02.8	35		47.8	69	40	25	5	57	24	25	60	17	73				
8	304	03.0		09.5	95	25.3	35	+25	54.5	67	35	21	51	17	43	61	9	00	71				
9	319	03.1		10.4	109	47.6	33	+26	01.1	66	30	18	46	11	18	59	62	8	45	69			
10	334	03.1		11.2	124	09.9	33		07.5	64	20	11	37	6	00	19	25	63	8	19	68		
11	349	03.2	-13	12.0	138	32.1	32	+26	13.7	62	10 N	5	03	5	28	5	50	19	48	64	7	57	66
12	4	03.2	-13	12.9	152	54.2	31	+26	19.7	60	0	4	55	5	19	5	40	20	10	65	7	37	64
13	19	03.3		13.7	167	16.3	31		25.5	58	10 S	44	5	09	31	31	66	7	16	62			
14	34	03.3		14.5	181	38.3	30		31.1	54	20	31	4	58	21	20	55	66	6	54	61		
15	49	03.4		15.4	196	00.2	29		36.5	53	30	14	44	09	21	22	67	29	58				
16	64	03.4		16.2	210	22.1	29		41.8	50	35	4	04	35	5	02	38	67	6	14	57		
17	79	03.5	-13	17.0	224	43.9	28	+26	46.8	48	40	3	51	4	25	4	54	21	57	67	5	57	54
18	94	03.5	-13	17.9	239	05.6	27	+26	51.6	47	45	3	35	4	13	4	45	22	19	69	5	36	52
19	109	03.6		18.7	253	27.3	27	+26	56.3	45	50	14	3	58	34	22	48	69	5	11	48		
20	124	03.6		19.5	267	49.0	27	+27	00.8	45	52	3	03	51	29	23	03	69	4	58	46		
21	139	03.7		20.4	282	10.6	26		05.0	42	54	2	51	43	23	19	70		44	44			
22	154	03.7		21.2	296	32.1	25		09.1	39	56	38	34	16	23	39	71		28	40			
23	169	03.7		22.0	310	53.6	25		13.0	36	58	21	23	09	**	**	**	4	08	35			
24	184	03.8	-13	22.9	325	15.1	25	+27	16.6	36	60 S	2	00	3	11	4	01	**	**	**	3	44	25

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 21 ^h 31.0 ^m		Mag: -4.3 PMG: 11 ^h 09 ^m		Mag: +0.9 PMG: 6 ^h 52 ^m		Mag: -2.0 PMG: 7 ^h 19 ^m		Mag: +0.4 PMG: 22 ^h 10 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	36	21.4	192	05.1	-16	18.3	249	59.4	+14	13.1	26	31.6	+1	18.3					
1	51	23.9	207	08.8		17.2	265	01.5		13.0	41	34.2		18.3					
2	66	26.3	222	12.5		16.2	280	03.7		12.9	56	36.8		18.2					
3	81	28.8	237	16.2		15.2	295	05.8		12.8	71	39.5		18.1					
4	96	31.3	252	19.8		14.2	310	08.0		12.7	86	42.1		18.1					
5	111	33.7	267	23.5	-16	13.1	325	10.1	+14	12.6	101	44.7	+1	18.0					
6	126	36.2	282	27.2	-16	12.1	340	12.2	+14	12.5	116	47.3	+1	18.0					
7	141	38.7	297	30.8		11.1	355	14.4		12.4	131	49.9		17.9					
8	156	41.1	312	34.5		10.1	10	16.5		12.3	146	52.6		17.8					
9	171	43.6	327	38.1		09.0	25	18.7		12.2	161	55.2		17.8					
10	186	46.1	342	41.8		08.0	40	20.8		12.1	176	57.8		17.7					
11	201	48.5	357	45.4	-16	07.0	55	23.0	+14	12.1	192	00.4	+1	17.7					
12	216	51.0	12	49.1	-16	06.0	70	25.1	+14	12.0	207	03.0	+1	17.6					
13	231	53.5	27	52.7		04.9	85	27.3		11.9	222	05.7		17.5					
14	246	55.9	42	56.4		03.9	100	29.4		11.8	237	08.3		17.5					
15	261	58.4	58	00.0		02.9	115	31.6		11.7	252	10.9		17.4					
16	277	00.8	73	03.7		01.8	130	33.7		11.6	267	13.5		17.3					
17	292	03.3	88	07.3	-16	00.8	145	35.9	+14	11.5	282	16.1	+1	17.3					
18	307	05.8	103	11.0	-15	59.8	160	38.0	+14	11.4	297	18.8	+1	17.2					
19	322	08.2	118	14.6		58.8	175	40.2		11.3	312	21.4		17.2					
20	337	10.7	133	18.2		57.7	190	42.3		11.2	327	24.0		17.1					
21	352	13.2	148	21.9		56.7	205	44.5		11.1	342	26.6		17.0					
22	7	15.6	163	25.5		55.7	220	46.6		11.0	357	29.2		17.0					
23	22	18.1	178	29.1		54.6	235	48.7		10.9	12	31.8		16.9					
24	37	20.6	193	32.7	-15	53.6	250	50.9	+14	10.8	27	34.5	+1	16.9					
Dif	—		+36		+10		+12		-3		+21		-1		+26		-1		

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG:11 ^h 43.7 ^m			Edad: 18.3 ^d SD: 16'4 PMG: 2 ^h 25 ^m PHE { 4 ^h : 60'2 12 ^h : 60'1 20 ^h : 60'1 Rº: 66 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	184	03.8	-13	22.9	325	15.1	24	+27	16.6	60 N	16 12	16 57	17 46	16 42	85		13 13	52	
1	199	03.8		23.7	339	36.5	24		20.1	58	20	17 01	47	17 16	81		12 39	56	
2	214	03.9		24.5	353	57.9	24		23.4	56	26	05	49	17 41	79		12 14	58	
3	229	03.9		25.3	8	19.3	24		26.4	54	32	09	51	18 01	77		11 53	60	
4	244	04.0		26.2	22	40.6	23		29.3	52	37	13	52	18 76			37	60	
5	259	04.0	-13	27.0	37	01.9	23	+27	31.9	50	16 42	17 16	17 54	18 33	74		11 22	62	
6	274	04.1	-13	27.8	51	23.2	23	+27	34.4	45	16 53	17 23	17 57	19 02	73		10 53	63	
7	289	04.1		28.7	65	44.4	22		36.6	40	17 01	29	18 01	25 71			30	63	
8	304	04.1		29.5	80	05.7	23		38.7	35	09	35	05	19 44	70		10 11	64	
9	319	04.2		30.3	94	26.9	22		40.5	30	16	40	08	20 01	69		9 54	65	
10	334	04.2		31.1	108	48.1	22		42.2	20	27	50	16	28 68			27	65	
11	349	04.3	-13	32.0	123	09.3	22	+27	43.6	10 N	17 37	17 59	18 24	20 52	67		9 03	65	
12	4	04.3	-13	32.8	137	30.5	22	+27	44.8	0	17 47	18 08	18 33	21 15	65		8 41	66	
13	19	04.3		33.6	151	51.7	22		45.9	10 S	17 57	19	44	21 37	64		8 18	67	
14	34	04.4		34.4	166	12.9	22		46.7	20	18 08	30	18 57	22 01	62		7 55	66	
15	49	04.4		35.3	180	34.1	22		47.3	30	20	45	19 15	29 60			27	67	
16	64	04.5		36.1	194	55.3	22		47.7	35	27	18 54	26	22 45	59		7 11	66	
17	79	04.5	-13	36.9	209	16.6	23	+27	47.9	40	18 35	19 04	19 39	23 04	58		6 51	67	
18	94	04.5	-13	37.7	223	37.8	22	+27	47.9	45	18 45	19 17	19 56	23 28	55		6 28	67	
19	109	04.6		38.6	237	59.0	22		47.7	50	18 57	32	20 18	23 57	53		5 59	67	
20	124	04.6		39.4	252	20.3	23		47.3	52	19 02	40	28	** ** *	**		44	67	
21	139	04.7		40.2	266	41.6	23		46.7	54	08	48	41	** ** *	**		28	66	
22	154	04.7		41.0	281	02.9	23		45.9	56	15	19 58	20 56	** ** *	**		5 08	66	
23	169	04.7		41.8	295	24.2	23		44.9	58	22	20 09	21 14	0 04	73		4 43	65	
24	184	04.8	-13	42.7	309	45.6	24	+27	43.7	60 S	19 31	20 22	21 36	0 38	74		4 09	64	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 21 ^h 27.1 ^m		Mag: -4.2 PMG: 11 ^h 03 ^m		Mag: +0.9 PMG: 6 ^h 50 ^m		Mag: -2.0 PMG: 7 ^h 16 ^m		Mag: +0.4 PMG: 22 ^h 06 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	37	20.6	193	32.7	-15	53.6	257	18.6	+17	10.6	250	50.9	+14	10.8	27	34.5	+1	16.9
1	52	23.0	208	36.4		52.6	272	19.7		10.2	265	53.0		10.7	42	37.1		16.8
2	67	25.5	223	40.0		51.5	287	20.9		09.9	280	55.2		10.6	57	39.7		16.7
3	82	28.0	238	43.6		50.5	302	22.1		09.6	295	57.3		10.5	72	42.3		16.7
4	97	30.4	253	47.2		49.5	317	23.2		09.2	310	59.5		10.4	87	44.9		16.6
5	112	32.9	268	50.8	-15	48.5	332	24.4	+17	08.9	326	01.6	+14	10.3	102	47.5	+1	16.6
6	127	35.3	283	54.4	-15	47.4	347	25.6	+17	08.5	341	03.8	+14	10.2	117	50.2	+1	16.5
7	142	37.8	298	58.0		46.4	2	26.8		08.2	356	05.9		10.1	132	52.8		16.4
8	157	40.3	314	01.6		45.4	17	27.9		07.8	11	08.1		10.0	147	55.4		16.4
9	172	42.7	329	05.2		44.3	32	29.1		07.5	26	10.2		09.9	162	58.0		16.3
10	187	45.2	344	08.8		43.3	47	30.3		07.2	41	12.4		09.8	178	00.6		16.3
11	202	47.7	359	12.4	-15	42.3	62	31.5	+17	06.8	56	14.6	+14	09.7	193	03.3	+1	16.2
12	217	50.1	14	16.0	-15	41.2	77	32.6	+17	06.5	71	16.7	+14	09.6	208	05.9	+1	16.2
13	232	52.6	29	19.6		40.2	92	33.8		06.1	86	18.9		09.5	223	08.5		16.1
14	247	55.1	44	23.2		39.2	107	35.0		05.8	101	21.0		09.4	238	11.1		16.0
15	262	57.5	59	26.8		38.1	122	36.2		05.4	116	23.2		09.3	253	13.7		16.0
16	278	00.0	74	30.4		37.1	137	37.3		05.1	131	25.3		09.2	268	16.3		15.9
17	293	02.5	89	34.0	-15	36.1	152	38.5	+17	04.8	146	27.5	+14	09.1	283	19.0	+1	15.9
18	308	04.9	104	37.6	-15	35.0	167	39.7	+17	04.4	161	29.6	+14	09.0	298	21.6	+1	15.8
19	323	07.4	119	41.1		34.0	182	40.9		04.1	176	31.8		08.9	313	24.2		15.7
20	338	09.8	134	44.7		33.0	197	42.0		03.7	191	33.9		08.8	328	26.8		15.7
21	353	12.3	149	48.3		32.0	212	43.2		03.4	206	36.1		08.7	343	29.4		15.6
22	8	14.8	164	51.9		30.9	227	44.4		03.0	221	38.2		08.6	358	32.0		15.6
23	23	17.2	179	55.4		29.9	242	45.6		02.7	236	40.4		08.5	13	34.6		15.5
24	38	19.7	194	59.0	-15	28.9	257	46.7	+17	02.4	251	42.5	+14	08.4	28	37.3	+1	15.4
Dif	—		+36		+10		+12		-3		+22		-1		+26		-	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 16'1 PMG:11 ^h 43.7 ^m			Edad: 19.3 ^d PHE { 4 ^h : 60'0 12 ^h : 59'9 20 ^h : 59'8 R°: 63 ^m																					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Náutico	Civil		Hora	R°	Hora	R°								
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m								
0	184	04.8	-13	42.7	309	45.6	24	+27	43.7	14	5	43	6	32	7	17	18	06	107	14	03	21			
1	199	04.8		43.5	324	07.0	24		42.3	17	41		27	09		35	99		13	34	28				
2	214	04.8		44.3	338	28.4	24		40.6	18	39		23	7	03	18	58	93		13	11	34			
3	229	04.9		45.1	352	49.9	25		38.8	18	38		19	6	57	19	16	89		12	52	38			
4	244	04.9		45.9	7	11.4	25		36.8	20	36		16	51		32	85		36	41					
5	259	05.0	-13	46.8	21	33.0	26	+27	34.6	22	5	34	6	12	6	46	19	46	82		12	22	43		
6	274	05.0	-13	47.6	35	54.6	26	+27	32.2	24	5	31	6	05	6	36	20	13	78		11	54	47		
7	289	05.0		48.4	50	16.3	27		29.5	27	27		5	59	27		35	75			32	50			
8	304	05.1		49.2	64	38.0	27		26.7	28	23		53	19		20	53	72		11	13	53			
9	319	05.1		50.0	78	59.7	27		23.7	30	19		48	12		21	08	70		10	57	55			
10	334	05.1		50.9	93	21.6	29		20.5	32	12		38	6	01		35	66			30	58			
11	349	05.2	-13	51.7	107	43.4	28	+27	17.1	34	5	04	5	29	5	50	21	57	63		10	07	60		
12	4	05.2	-13	52.5	122	05.4	30	+27	13.5	36	4	54	5	19	5	40	22	18	60		9	45	62		
13	19	05.2		53.3	136	27.4	30		09.7	38	43		5	09	30		22	39	57			23	65		
14	34	05.3		54.1	150	49.5	31		05.8	39	20		4	57	20		23	02	53		9	00	66		
15	49	05.3		54.9	165	11.6	31	+27	01.6	42	30		12	42	07		28	49		8	32	70			
16	64	05.3		55.8	179	33.8	32	+26	57.2	44	35		4	01	33	5	00	23	43	47		8	16	71	
17	79	05.3	-13	56.6	193	56.1	33	+26	52.7	45	40		3	48	4	23	4	52	**	**	**		7	57	73
18	94	05.4	-13	57.4	208	18.5	34	+26	48.0	47	45		3	31	4	10	4	42	**	**	**		7	34	75
19	109	05.4		58.2	222	41.0	35		43.0	50	50		3	09	3	54	30	**	**	**		7	04	80	
20	124	05.4		59.0	237	03.5	35		37.9	51	52		2	58	47	25	0	12	50		6	50	81		
21	139	05.5	-13	59.8	251	26.1	36		32.7	52	54		46	38	19		29	47			33	83			
22	154	05.5	-14	00.6	265	48.8	37		27.2	55	56		31	29	12		0	50	44		6	13	87		
23	169	05.5		01.5	280	11.6	38		21.6	56	58		2	13	18	4	04	1	15	40		5	47	92	
24	184	05.6	-14	02.3	294	34.5	39	+26	15.7	59	60 S		1	50	3	05	3	56	1	51	30		5	12	101

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 23.2 ^m		Mag: -4.1 PMG: 10 ^h 57 ^m			Mag: +0.9 PMG: 6 ^h 48 ^m			Mag: -2.0 PMG: 7 ^h 12 ^m			Mag: +0.5 PMG: 22 ^h 02 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	38	19.7	194	59.0	-15	28.9	257	46.7	+17	02.4	251	42.5	+14	08.4	28	37.3	+1	15.4
1	53	22.2	210	02.5		27.8	272	47.9		02.0	266	44.7		08.3	43	39.9		15.4
2	68	24.6	225	06.1		26.8	287	49.1		01.7	281	46.9		08.2	58	42.5		15.3
3	83	27.1	240	09.7		25.8	302	50.3		01.3	296	49.0		08.1	73	45.1		15.3
4	98	29.6	255	13.2		24.7	317	51.5		01.0	311	51.2		08.0	88	47.7		15.2
5	113	32.0	270	16.8	-15	23.7	332	52.6	+17	00.6	326	53.3	+14	07.9	103	50.3	+1	15.1
6	128	34.5	285	20.3	-15	22.7	347	53.8	+17	00.3	341	55.5	+14	07.8	118	53.0	+1	15.1
7	143	37.0	300	23.9		21.7	2	55.0	+17	00.0	356	57.6		07.7	133	55.6		15.0
8	158	39.4	315	27.4		20.6	17	56.2	+16	59.6	11	59.8		07.6	148	58.2		15.0
9	173	41.9	330	30.9		19.6	32	57.4		59.3	27	01.9		07.5	164	00.8		14.9
10	188	44.3	345	34.5		18.6	47	58.6		58.9	42	04.1		07.5	179	03.4		14.9
11	203	46.8	0	38.0	-15	17.5	62	59.7	+16	58.6	57	06.3	+14	07.4	194	06.0	+1	14.8
12	218	49.3	15	41.5	-15	16.5	78	00.9	+16	58.2	72	08.4	+14	07.3	209	08.6	+1	14.7
13	233	51.7	30	45.1		15.5	93	02.1		57.9	87	10.6		07.2	224	11.3		14.7
14	248	54.2	45	48.6		14.4	108	03.3		57.6	102	12.7		07.1	239	13.9		14.6
15	263	56.7	60	52.1		13.4	123	04.5		57.2	117	14.9		07.0	254	16.5		14.6
16	278	59.1	75	55.6		12.4	138	05.7		56.9	132	17.0		06.9	269	19.1		14.5
17	294	01.6	90	59.2	-15	11.4	153	06.9	+16	56.5	147	19.2	+14	06.8	284	21.7	+1	14.4
18	309	04.1	106	02.7	-15	10.3	168	08.0	+16	56.2	162	21.4	+14	06.7	299	24.3	+1	14.4
19	324	06.5	121	06.2		09.3	183	09.2		55.8	177	23.5		06.6	314	26.9		14.3
20	339	09.0	136	09.7		08.3	198	10.4		55.5	192	25.7		06.5	329	29.6		14.3
21	354	11.5	151	13.2		07.3	213	11.6		55.2	207	27.8		06.4	344	32.2		14.2
22	9	13.9	166	16.7		06.2	228	12.8		54.8	222	30.0		06.3	359	34.8		14.2
23	24	16.4	181	20.2		05.2	243	14.0		54.5	237	32.2		06.2	14	37.4		14.1
24	39	18.8	196	23.7	-15	04.2	258	15.2	+16	54.1	252	34.3	+14	06.1	29	40.0	+1	14.0
Dif	—		+35		+10		+12		-3		+22		-1		+26		-1	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'1 PMG: 11 ^h 43.6 ^m				Edad: 20.3 ^d SD: 16'3 PMG: 4 ^h 33 ^m								PHE { 4 ^h : 59'6 12 ^h : 59'5 20 ^h : 59'4 R°: 60 ^m									
	hG ☉	Dec			hG ☾	Dif			Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	184	05.6	-14	02.3	294	34.5	39	+26	15.7	60	60 N	16 07	16 52	17 41	19 53	110	14 24	9				
1	199	05.6		03.1	308	57.4	41		09.7	61	58	15	16 57	43	20 14	102	14 02	17				
2	214	05.6		03.9	323	20.5	42	+26	03.6	64	56	22	17 01	45	31 97	13 45	21					
3	229	05.6		04.7	337	43.7	42	+25	57.2	64	54	28	05	47	45 93	30	26					
4	244	05.7		05.5	352	06.9	43		50.7	65	52	34	09	49	20 57	90	17	29				
5	259	05.7	-14	06.3	6	30.2	43	+25	44.0	67	50	16 39	17 12	17 51	21 08	87	13 05	32				
6	274	05.7	-14	07.1	20	53.7	45	+25	37.1	70	45	16 50	17 20	17 55	21 31	81	12 41	38				
7	289	05.7		07.9	35	17.2	47		30.1	72	40	16 59	27	17 59	21 50	76	22	41				
8	304	05.8		08.7	49	40.9	47		22.9	72	35	17 07	33	18 03	22 05	73	12 06	44				
9	319	05.8		09.6	64	04.6	49		15.5	74	30	14	38	07	18 70	11 52	47					
10	334	05.8		10.4	78	28.5	49		08.0	75	20	26	49	15	22 41	64	28	52				
11	349	05.9	-14	11.2	92	52.4	49	+25	00.3	77	10 N	17 37	17 58	18 23	23 00	61	11 07	56				
12	4	05.9	-14	12.0	107	16.5	51	+24	52.5	78	0	17 47	18 08	18 33	23 18	57	10 47	59				
13	19	05.9		12.8	121	40.6	51		44.5	80	10 S	17 57	19	45	36 53	28	62					
14	34	05.9		13.6	136	04.9	53		36.3	82	20	18 09	32	18 59	23 55	49	10 06	67				
15	49	05.9		14.4	150	29.3	54		28.0	83	30	21	47	19 17	** ** *	9 42	70					
16	64	06.0		15.2	164	53.8	55		19.5	85	35	29	18 56	28	** ** *	27	74					
17	79	06.0	-14	16.0	179	18.4	56	+24	10.9	86	40	18 38	19 07	19 42	0 01	46	9 10	77				
18	94	06.0	-14	16.8	193	43.1	57	+24	02.1	88	45	18 48	19 20	19 59	0 22	42	8 49	81				
19	109	06.0		17.6	208	07.9	58	+23	53.2	89	50	19 00	36	20 22	0 49	37	24	86				
20	124	06.1		18.4	222	32.9	60		44.1	91	52	06	44	33	1 02	34	8 11	90				
21	139	06.1		19.2	236	57.9	60		34.9	92	54	12	19 53	20 47	16 31	7 56	94					
22	154	06.1		20.0	251	23.1	62		25.6	93	56	19	20 03	21 02	34 27	40	97					
23	169	06.1		20.8	265	48.4	63		16.1	95	58	27	14	21	1 55	21	7 19	104				
24	184	06.1	-14	21.6	280	13.8	64	+23	06.4	97	60 S	19 36	20 28	21 46	2 21	13	6 53	112				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 19.2 ^m		Mag: -4.1 PMG: 10 ^h 52 ^m		Mag: +0.9 PMG: 6 ^h 46 ^m		Mag: -2.0 PMG: 7 ^h 09 ^m		Mag: +0.5 PMG: 21 ^h 58 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	39	18.8	196	23.7	-15	04.2	258	15.2	+16	54.1
1	54	21.3	211	27.2		03.2	273	16.3		53.8
2	69	23.8	226	30.7		02.1	288	17.5		53.4
3	84	26.2	241	34.2		01.1	303	18.7		53.1
4	99	28.7	256	37.7	-15	00.1	318	19.9		52.8
5	114	31.2	271	41.1	-14	59.1	333	21.1	+16	52.4
6	129	33.6	286	44.6	-14	58.0	348	22.3	+16	52.1
7	144	36.1	301	48.1		57.0	3	23.5		51.7
8	159	38.6	316	51.6		56.0	18	24.7		51.4
9	174	41.0	331	55.0		55.0	33	25.9		51.1
10	189	43.5	346	58.5		53.9	48	27.1		50.7
11	204	46.0	2	02.0	-14	52.9	63	28.3	+16	50.4
12	219	48.4	17	05.4	-14	51.9	78	29.5	+16	50.0
13	234	50.9	32	08.9		50.9	93	30.6		49.7
14	249	53.3	47	12.4		49.9	108	31.8		49.3
15	264	55.8	62	15.8		48.8	123	33.0		49.0
16	279	58.3	77	19.3		47.8	138	34.2		48.7
17	295	00.7	92	22.7	-14	46.8	153	35.4	+16	48.3
18	310	03.2	107	26.1	-14	45.8	168	36.6	+16	48.0
19	325	05.7	122	29.6		44.8	183	37.8		47.6
20	340	08.1	137	33.0		43.8	198	39.0		47.3
21	355	10.6	152	36.5		42.7	213	40.2		46.9
22	10	13.1	167	39.9		41.7	228	41.4		46.6
23	25	15.5	182	43.3		40.7	243	42.6		46.3
24	40	18.0	197	46.7	-14	39.7	258	43.8	+16	45.9
Dif	—		+35		+10		+12		-3	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 43.6 ^m				Edad: 21.3 ^d SD: 16'1 PMG: 5 ^h 32 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	184	06.1	-14	21.6	280	13.8	+23	06.4	97	56.7	60 N	5	47	6	37	7	22	21	41	103
1	199	06.2		22.4	294	39.3	+22	56.7	99	58	45		32		14		21	55	97	
2	214	06.2		23.2	309	04.9		46.8	101	56	43		27		07		22	06	93	
3	229	06.2		24.0	323	30.7		36.7	101	54	41		23		7	00	17	89	13	
4	244	06.2		24.8	337	56.5		26.6	101	52	39		19		6	55	26	85	44	
5	259	06.2	-14	25.6	352	22.5	+22	16.3	103	50	5	37	6	16	6	50	22	34	83	
6	274	06.3	-14	26.4	6	48.6	+22	05.8	105	45	5	33	6	08	6	38	22	51	77	
7	289	06.3		27.2	21	14.8	+21	55.3	105	40	29		6	01	29		23	05	72	
8	304	06.3		28.0	35	41.1		44.6	107	35	25		5	55	21		16	69	12	
9	319	06.3		28.8	50	07.5		33.8	108	30	21		49		14		26	66	38	
10	334	06.3		29.6	64	34.1		22.9	109	20	13		39	6	01		44	60	18	
11	349	06.3	-14	30.4	79	00.8	+21	11.8	111	10 N	5	04	5	29	5	50	23	59	55	
12	4	06.4	-14	31.2	93	27.5	+21	00.7	111	0	4	54	5	19	5	40	**	**	**	
13	19	06.4		32.0	107	54.4	+20	49.4	113	10 S	43		5	08	30		**	**	**	
14	34	06.4		32.8	122	21.5		38.0	114	20	28		4	55	18		**	**	**	
15	49	06.4		33.6	136	48.6		26.5	115	30	4	10	40		5	05	0	17	42	
16	64	06.4		34.4	151	15.8		14.9	116	35	3	59	31		4	58	30	39	39	
17	79	06.4	-14	35.2	165	43.2	+20	03.2	117	40	3	45	4	20	4	49	0	45	35	
18	94	06.4	-14	36.0	180	10.6	+19	51.4	118	45	3	27	4	07	4	39	1	03	31	
19	109	06.5		36.8	194	38.2		39.4	120	50	3	04	3	50	27		24	26	9	
20	124	06.5		37.6	209	05.9		27.4	120	52	2	53	42		21		35	22	39	
21	139	06.5		38.4	223	33.7		15.3	121	54	40		34		14		46	19	28	
22	154	06.5		39.2	238	01.6	+19	03.0	123	56	24		24	4	07		1	59	16	
23	169	06.5		40.0	252	29.7	+18	50.7	123	58	2	05	3	12	3	59	2	14	11	
24	184	06.5	-14	40.8	266	57.8	+18	38.3	124	60 S	1	40	2	58	3	50	2	32	5	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 15.3 ^m		Mag: -4.2 PMG: 10 ^h 46 ^m		Mag: +0.9 PMG: 6 ^h 45 ^m		Mag: -2.0 PMG: 7 ^h 05 ^m		Mag: +0.5 PMG: 21 ^h 53 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	40	18.0	197	46.7	258	43.8	253	26.2	30	42.7
1	55	20.4	212	50.2	273	45.0	268	28.4	45	45.3
2	70	22.9	227	53.6	288	46.2	283	30.6	60	47.9
3	85	25.4	242	57.0	303	47.4	298	32.7	75	50.5
4	100	27.8	258	00.4	318	48.6	313	34.9	90	53.1
5	115	30.3	273	03.8	333	49.8	328	37.1	105	55.8
6	130	32.8	288	07.2	348	51.0	343	39.2	120	58.4
7	145	35.2	303	10.6	3	52.2	358	41.4	136	01.0
8	160	37.7	318	14.0	18	53.4	13	43.6	151	03.6
9	175	40.2	333	17.4	33	54.6	28	45.7	166	06.2
10	190	42.6	348	20.8	48	55.8	43	47.9	181	08.8
11	205	45.1	3	24.2	63	57.0	58	50.1	196	11.4
12	220	47.6	18	27.6	78	58.2	73	52.2	211	14.0
13	235	50.0	33	31.0	93	59.4	88	54.4	226	16.6
14	250	52.5	48	34.3	109	00.6	103	56.6	241	19.2
15	265	54.9	63	37.7	124	01.8	118	58.7	256	21.9
16	280	57.4	78	41.1	139	03.0	134	00.9	271	24.5
17	295	59.9	93	44.5	154	04.2	149	03.1	286	27.1
18	311	02.3	108	47.8	169	05.4	164	05.3	301	29.7
19	326	04.8	123	51.2	184	06.6	179	07.4	316	32.3
20	341	07.3	138	54.6	199	07.8	194	09.6	331	34.9
21	356	09.7	153	57.9	214	09.0	209	11.8	346	37.5
22	11	12.2	169	01.3	229	10.3	224	13.9	1	40.1
23	26	14.7	184	04.6	244	11.5	239	16.1	16	42.7
24	41	17.1	199	08.0	259	12.7	254	18.3	31	45.3
Dif	—		+34		+10		+22		+26	

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG:11 ^h 43.6 ^m				Edad: 22.3 ^d SD: 16'0 PMG: 6 ^h 26 ^m						PHE $\left\{ \begin{array}{l} 4^{\text{h}}: 58'7 \\ 12^{\text{h}}: 58'5 \\ 20^{\text{h}}: 58'3 \\ \text{R}^{\circ}: 51^{\text{m}} \end{array} \right.$					
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°		
h	° /	° /	° /		° /		°	h m	h m	h m	h m m	h m m	h m m			
0	184 06.5	−14 40.8	266 57.8	92	+18 38.3	125	60 N	16 02	16 47	17 36	23 24	97	14 35 3			
1	199 06.5		281 26.0		25.8	127	58	10	52	39	32 93		26 7			
2	214 06.5		295 54.4	94	13.1	127	56	17	16 57	41	39 90		18 10			
3	229 06.6		310 22.9	95	+18 00.4	127	54	24	17 02	43	46 86		10 14			
4	244 06.6		324 51.4	95	+17 47.6	128	52	30	06	46	51 84		14 04 16			
5	259 06.6	−14 44.7	339 20.1	97	+17 34.8	128	50	16 35	17 09	17 48	23 57	81	13 58 19			
6	274 06.6	−14 45.5	353 48.9	98	+17 21.8	130	45	16 47	17 18	17 52	** ** *		13 45 24			
7	289 06.6		8 17.8	99	+17 08.7	131	40	16 57	25	17 57	** ** **		34 28			
8	304 06.6		22 46.7	99	+16 55.6	131	35	17 05	31	18 01	** ** **		25 32			
9	319 06.6		37 15.8	101	42.4	132	30	12	37	05	** ** **		16 36			
10	334 06.6		51 45.0	102	29.1	133	20	25	48	14	** ** **		13 02 41			
11	349 06.6	−14 49.5	66 14.3	103	+16 15.7	134	10 N	17 36	17 58	18 23	** ** *		12 50 45			
12	4 06.6	−14 50.3	80 43.7	104	+16 02.3	134	0	17 47	18 08	18 33	0 13	52	12 38 50			
13	19 06.6		95 13.2	105	+15 48.8	135	10 S	17 58	20	18 45	27 48		26 54			
14	34 06.6		109 42.8	106	35.2	136	20	18 10	33	19 00	42 43		12 13 60			
15	49 06.7		124 12.5	107	21.5	137	30	23	48	18	0 59	38	11 58 65			
16	64 06.7		138 42.3	108	+15 07.8	137	35	31	18 58	30	1 09	34	49 69			
17	79 06.7	−14 54.2	153 12.1	108	+14 54.0	138	40	18 40	19 09	19 45	1 20	31	11 39 73			
18	94 06.7	−14 55.0	167 42.1	110	+14 40.1	139	45	18 50	19 23	20 03	1 34	26	11 28 77			
19	109 06.7		182 12.2	111	26.2	139	50	19 03	40	27	50 20		13 83			
20	124 06.7		196 42.3	111	+14 12.2	140	52	09	48	38	1 57	18	11 07 85			
21	139 06.7		211 12.6	113	+13 58.1	141	54	16	19 57	20 52	2 05	15	10 59 89			
22	154 06.7		225 42.9	113	44.0	141	56	23	20 08	21 09	15 11		51 92			
23	169 06.7		240 13.3	114	29.8	142	58	32	20	30	25 8		41 97			
24	184 06.7	−14 59.7	254 43.8	115	+13 15.6	142	60 S	19 42	20 35	21 57	2 37	3	10 30 101			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 21 ^h 11.4 ^m		Mag: −4.3 PMG: 10 ^h 41 ^m		Mag: +0.9 PMG: 6 ^h 43 ^m		Mag: −2.0 PMG: 7 ^h 02 ^m		Mag: +0.5 PMG: 21 ^h 49 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /		° /		° /		° /	
0	41 17.1	199 08.0	−14 15.5	259 12.7	+16 37.7	254 18.3	+14 01.6	31 45.3	+1 11.3	
1	56 19.6	214 11.3	14.5	274 13.9	37.3	269 20.5	01.5	46 47.9	11.3	
2	71 22.1	229 14.6	13.5	289 15.1	37.0	284 22.6	01.5	61 50.6	11.2	
3	86 24.5	244 18.0	12.5	304 16.3	36.7	299 24.8	01.4	76 53.2	11.2	
4	101 27.0	259 21.3	11.5	319 17.5	36.3	314 27.0	01.3	91 55.8	11.1	
5	116 29.4	274 24.6	−14 10.5	334 18.7	+16 36.0	329 29.1	+14 01.2	106 58.4	+1 11.1	
6	131 31.9	289 28.0	−14 09.6	349 19.9	+16 35.6	344 31.3	+14 01.1	122 01.0	+1 11.0	
7	146 34.4	304 31.3	08.6	4 21.1	35.3	359 33.5	01.0	137 03.6	10.9	
8	161 36.8	319 34.6	07.6	19 22.3	34.9	14 35.7	00.9	152 06.2	10.9	
9	176 39.3	334 37.9	06.6	34 23.6	34.6	29 37.8	00.8	167 08.8	10.8	
10	191 41.8	349 41.2	05.6	49 24.8	34.3	44 40.0	00.7	182 11.4	10.8	
11	206 44.2	4 44.5	−14 04.6	64 26.0	+16 33.9	59 42.2	+14 00.6	197 14.0	+1 10.7	
12	221 46.7	19 47.8	−14 03.6	79 27.2	+16 33.6	74 44.4	+14 00.5	212 16.6	+1 10.7	
13	236 49.2	34 51.2	02.6	94 28.4	33.2	89 46.5	00.5	227 19.2	10.6	
14	251 51.6	49 54.4	01.6	109 29.6	32.9	104 48.7	00.4	242 21.8	10.6	
15	266 54.1	64 57.7	−14 00.6	124 30.8	32.6	119 50.9	00.3	257 24.5	10.5	
16	281 56.6	80 01.0	−13 59.7	139 32.0	32.2	134 53.1	00.2	272 27.1	10.5	
17	296 59.0	95 04.3	−13 58.7	154 33.3	+16 31.9	149 55.2	+14 00.1	287 29.7	+1 10.4	
18	312 01.5	110 07.6	−13 57.7	169 34.5	+16 31.5	164 57.4	+14 00.0	302 32.3	+1 10.3	
19	327 03.9	125 10.9	56.7	184 35.7	31.2	179 59.6	+13 59.9	317 34.9	10.3	
20	342 06.4	140 14.2	55.7	199 36.9	30.8	195 01.8	59.8	332 37.5	10.2	
21	357 08.9	155 17.4	54.8	214 38.1	30.5	210 03.9	59.7	347 40.1	10.2	
22	12 11.3	170 20.7	53.8	229 39.3	30.2	225 06.1	59.6	2 42.7	10.1	
23	27 13.8	185 24.0	52.8	244 40.6	29.8	240 08.3	59.6	17 45.3	10.1	
24	42 16.3	200 27.2	−13 51.8	259 41.8	+16 29.5	255 10.5	+13 59.5	32 47.9	+1 10.0	
Dif	—	+33	+10	+12	−3	+22	−1	+26	−1	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 11 ^h 43.6 ^m			Edad: 23.3 ^d PHE { 4 ^h : 58 ¹ 12 ^h : 58 ⁰ 20 ^h : 57 ⁸ R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	m	
0	184	06.7	-14	59.7	254	43.8	+13	15.6	60 N	5	52	6	42	7	27	**	**	**
1	199	06.7	-15	00.5	269	14.4	+13	01.3	58	49	36	19			**	**	**	
2	214	06.7		01.3	283	45.1	+12	47.0	56	47	31	11			**	**	**	
3	229	06.7		02.0	298	15.9		32.6	54	45	27	7	04		**	**	**	
4	244	06.7		02.8	312	46.7		18.1	52	42	22	6	58		**	**	**	
5	259	06.7	-15	03.6	327	17.6	+12	03.6	50	5	40	6	19	6	53	**	**	**
6	274	06.7	-15	04.4	341	48.7	+11	49.1	45	5	35	6	10	6	41	0	08	74
7	289	06.7		05.2	356	19.7		34.5	40	31	6	03	31		17	70	14	01
8	304	06.7		05.9	10	50.9		19.9	35	26	5	56	23		25	66	13	55
9	319	06.7		06.7	25	22.1	+11	05.2	30	22	51	15			32	62	50	31
10	334	06.7		07.5	39	53.4	+10	50.4	20	13	40	6	02		44	56	41	37
11	349	06.7	-15	08.3	54	24.8	+10	35.7	10 N	5	04	5	29	5	51	0	54	52
12	4	06.7	-15	09.1	68	56.3	+10	20.9	0	4	54	5	19	5	40	1	04	47
13	19	06.7		09.8	83	27.8	+10	06.0	10 S	42	5	07	29		13	43	19	50
14	34	06.7		10.6	97	59.4	+9	51.2	20	27	4	54	17		24	37	11	55
15	49	06.7		11.4	112	31.1		36.2	30	4	08	38	5	04	35	32	13	02
16	64	06.7		12.2	127	02.8		21.3	35	3	56	29	4	56	42	29	12	57
17	79	06.7	-15	12.9	141	34.6	+9	06.3	40	3	42	4	17	4	47	1	49	25
18	94	06.7	-15	13.7	156	06.5	+8	51.3	45	3	24	4	04	4	36	1	58	21
19	109	06.7		14.5	170	38.4		36.3	50	3	00	3	47	23	2	09	15	35
20	124	06.7		15.3	185	10.4		21.2	52	2	48	38	17	14	13	31	81	78
21	139	06.7		16.0	199	42.5	+8	06.1	54	34	29	10			19	11	27	83
22	154	06.7		16.8	214	14.6	+7	51.0	56	2	17	18	4	03	25	8	22	86
23	169	06.7		17.6	228	46.8		35.8	58	1	57	3	06	3	54	31	5	16
24	184	06.7	-15	18.4	243	19.0	+7	20.6	60 S	1	29	2	52	3	45	2	39	0

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 07.4 ^m		Mag: -4.3 PMG: 10 ^h 36 ^m			Mag: +0.9 PMG: 6 ^h 41 ^m			Mag: -2.0 PMG: 6 ^h 58 ^m			Mag: +0.5 PMG: 21 ^h 45 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	42	16.3	200	27.2	-13	51.8	259	41.8	+16	29.5	255	10.5	+13	59.5	32	47.9	+1	10.0
1	57	18.7	215	30.5		50.8	274	43.0		29.1	270	12.6		59.4	47	50.5		10.0
2	72	21.2	230	33.8		49.9	289	44.2		28.8	285	14.8		59.3	62	53.1		09.9
3	87	23.7	245	37.0		48.9	304	45.4		28.4	300	17.0		59.2	77	55.7		09.9
4	102	26.1	260	40.3		47.9	319	46.6		28.1	315	19.2		59.1	92	58.3		09.8
5	117	28.6	275	43.5	-13	46.9	334	47.9	+16	27.8	330	21.4	+13	59.0	108	00.9	+1	09.8
6	132	31.0	290	46.8	-13	46.0	349	49.1	+16	27.4	345	23.5	+13	58.9	123	03.5	+1	09.7
7	147	33.5	305	50.0		45.0	4	50.3		27.1	0	25.7		58.8	138	06.2		09.6
8	162	36.0	320	53.2		44.0	19	51.5		26.7	15	27.9		58.8	153	08.8		09.6
9	177	38.4	335	56.5		43.1	34	52.8		26.4	30	30.1		58.7	168	11.4		09.5
10	192	40.9	350	59.7		42.1	49	54.0		26.0	45	32.3		58.6	183	14.0		09.5
11	207	43.4	6	02.9	-13	41.1	64	55.2	+16	25.7	60	34.4	+13	58.5	198	16.6	+1	09.4
12	222	45.8	21	06.1	-13	40.2	79	56.4	+16	25.4	75	36.6	+13	58.4	213	19.2	+1	09.4
13	237	48.3	36	09.3		39.2	94	57.6		25.0	90	38.8		58.3	228	21.8		09.3
14	252	50.8	51	12.6		38.2	109	58.9		24.7	105	41.0		58.2	243	24.4		09.3
15	267	53.2	66	15.8		37.3	125	00.1		24.3	120	43.2		58.1	258	27.0		09.2
16	282	55.7	81	19.0		36.3	140	01.3		24.0	135	45.3		58.0	273	29.6		09.2
17	297	58.2	96	22.2	-13	35.4	155	02.5	+16	23.7	150	47.5	+13	58.0	288	32.2	+1	09.1
18	313	00.6	111	25.4	-13	34.4	170	03.8	+16	23.3	165	49.7	+13	57.9	303	34.8	+1	09.1
19	328	03.1	126	28.6		33.4	185	05.0		23.0	180	51.9		57.8	318	37.4		09.0
20	343	05.5	141	31.8		32.5	200	06.2		22.6	195	54.1		57.7	333	40.0		09.0
21	358	08.0	156	35.0		31.5	215	07.4		22.3	210	56.2		57.6	348	42.6		08.9
22	13	10.5	171	38.1		30.6	230	08.7		21.9	225	58.4		57.5	3	45.2		08.9
23	28	12.9	186	41.3		29.6	245	09.9		21.6	241	00.6		57.4	18	47.8		08.8
24	43	15.4	201	44.5	-13	28.7	260	11.1	+16	21.3	256	02.8	+13	57.3	33	50.4	+1	08.7
Dif	—		+32		+10		+12		-3		+22		-1		+26		-	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16 ^h 1 PMG: 11 ^h 43.6 ^m				Edad: 24.3 ^d PHE { 4 ^h : 57/6 12 ^h : 57/4 20 ^h : 57/3 SD: 15/7 PMG: 8 ^h 01 ^m Rº: 46 ^m																		
	hG ☉	Dec			hG ☾	Dif			Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº					
h	°	'	°	'	°	'		°	'		°	h	m	h	m	h	m	m	h	m	m		
0	184	06.7	-15	18.4	243	19.0		+7	20.6	152	60 N	15	56	16	42	17	32	1	00	93	14	37	2
1	199	06.7		19.1	257	51.3	133	+7	05.4	152	58	16	05		48		35		04	90		36	4
2	214	06.7		19.9	272	23.6	133	+6	50.2	152	56		13		53		38		07	87		34	8
3	229	06.6		20.7	286	56.0	134		35.0	152	54		20	16	58		40		11	83		32	11
4	244	06.6		21.4	301	28.4	134		19.7	153	52		26	17	02		42		14	80		31	13
5	259	06.6	-15	22.2	316	00.9	135	+6	04.4	153	50	16	32	17	06	17	45	1	16	78	14	30	15
6	274	06.6	-15	23.0	330	33.5	136	+5	49.1	153	45	16	44	17	15	17	50	1	22	73	14	27	20
7	289	06.6		23.8	345	06.1	136		33.8	153	40	16	54		23		55		27	68	25	25	24
8	304	06.6		24.5	359	38.7	136		18.5	153	35	17	03		29	17	59		31	64		23	27
9	319	06.6		25.3	14	11.4	137	+5	03.2	153	30		11		36	18	04		34	62		21	30
10	334	06.6		26.1	28	44.1	137	+4	47.8	154	20		24		47		13		40	56		18	36
11	349	06.6	-15	26.8	43	16.9	138	+4	32.5	153	10 N	17	36	17	58	18	23	1	46	50	14	15	41
12	4	06.6	-15	27.6	57	49.7	138	+4	17.1	154	0	17	47	18	08	18	33	1	51	46	14	12	46
13	19	06.6		28.4	72	22.6	139	+4	01.7	154	10 S	17	58		20	18	46	1	56	41		09	51
14	34	06.5		29.1	86	55.5	139	+3	46.3	154	20	18	11		34	19	01	2	01	37		06	56
15	49	06.5		29.9	101	28.4	139		30.9	154	30		25	18	50		20		07	31		03	61
16	64	06.5		30.7	116	01.4	140		15.5	154	35		33	19	00		33		11	27	14	01	64
17	79	06.5	-15	31.4	130	34.4	140	+3	00.2	153	40	18	42	19	12	19	48	2	14	25	13	59	68
18	94	06.5	-15	32.2	145	07.4	140	+2	44.8	154	45	18	53	19	26	20	06	2	19	20	13	56	72
19	109	06.5		33.0	159	40.5	141		29.4	154	50	19	07		44		31		24	16		53	78
20	124	06.5		33.7	174	13.6	141	+2	14.0	154	52		13	19	52		44		27	13		52	79
21	139	06.5		34.5	188	46.7	141	+1	58.6	154	54		20	20	02	20	58		30	10		50	83
22	154	06.4		35.3	203	19.9	142		43.2	154	56		28		13	21	16		33	7		48	86
23	169	06.4		36.0	217	53.0	141		27.8	154	58		37		26	21	38		36	5		46	89
24	184	06.4	-15	36.8	232	26.3	143	+1	12.4	154	60 S	19	47	20	41	22	08	2	39	2	13	44	92
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 21 ^h 03.5 ^m			Mag: -4.4 PMG: 10 ^h 31 ^m			Mag: +0.9 PMG: 6 ^h 39 ^m			Mag: -2.0 PMG: 6 ^h 55 ^m			Mag: +0.5 PMG: 21 ^h 41 ^m										
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♅	Dec	hG ♄	Dec	hG ♆	Dec										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'									
0	43	15.4	201	44.5	-13	28.7	260	11.1	+16	21.3	256	02.8	+13	57.3	33	50.4	+1	08.7					
1	58	17.9	216	47.7		27.7	275	12.3		20.9	271	05.0		57.3	48	53.0		08.7					
2	73	20.3	231	50.8		26.8	290	13.6		20.6	286	07.2		57.2	63	55.6		08.6					
3	88	22.8	246	54.0		25.8	305	14.8		20.2	301	09.3		57.1	78	58.2		08.6					
4	103	25.3	261	57.2		24.9	320	16.0		19.9	316	11.5		57.0	94	00.8		08.5					
5	118	27.7	277	00.3	-13	23.9	335	17.3	+16	19.6	331	13.7	+13	56.9	109	03.4	+1	08.5					
6	133	30.2	292	03.5	-13	23.0	350	18.5	+16	19.2	346	15.9	+13	56.8	124	06.0	+1	08.4					
7	148	32.6	307	06.6		22.0	5	19.7		18.9	1	18.1		56.7	139	08.6		08.4					
8	163	35.1	322	09.8		21.1	20	21.0		18.5	16	20.3		56.6	154	11.2		08.3					
9	178	37.6	337	12.9		20.2	35	22.2		18.2	31	22.5		56.6	169	13.9		08.3					
10	193	40.0	352	16.1		19.2	50	23.4		17.8	46	24.6		56.5	184	16.5		08.2					
11	208	42.5	7	19.2	-13	18.3	65	24.6	+16	17.5	61	26.8	+13	56.4	199	19.1	+1	08.2					
12	223	45.0	22	22.3	-13	17.3	80	25.9	+16	17.2	76	29.0	+13	56.3	214	21.7	+1	08.1					
13	238	47.4	37	25.5		16.4	95	27.1		16.8	91	31.2		56.2	229	24.3		08.1					
14	253	49.9	52	28.6		15.5	110	28.3		16.5	106	33.4		56.1	244	26.9		08.0					
15	268	52.4	67	31.7		14.5	125	29.6		16.1	121	35.6		56.0	259	29.5		08.0					
16	283	54.8	82	34.8		13.6	140	30.8		15.8	136	37.8		56.0	274	32.1		07.9					
17	298	57.3	97	37.9	-13	12.7	155	32.0	+16	15.5	151	40.0	+13	55.9	289	34.7	+1	07.9					
18	313	59.8	112	41.1	-13	11.7	170	33.3	+16	15.1	166	42.1	+13	55.8	304	37.3	+1	07.8					
19	329	02.2	127	44.2		10.8	185	34.5		14.8	181	44.3		55.7	319	39.9		07.8					
20	344	04.7	142	47.3		09.9	200	35.8		14.4	196	46.5		55.6	334	42.5		07.7					
21	359	07.1	157	50.4		09.0	215	37.0		14.1	211	48.7		55.5	349	45.1		07.7					
22	14	09.6	172	53.5		08.0	230	38.2		13.8	226	50.9		55.4	4	47.7		07.6					
23	29	12.1	187	56.6		07.1	245	39.5		13.4	241	53.1		55.4	19	50.3		07.6					
24	44	14.5	202	59.6	-13	06.2	260	40.7	+16	13.1	256	55.3	+13	55.3	34	52.9	+1	07.5					
Dif	—			+31	+9		+12	-3		+22	-1				+26	-							

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 11 ^h 43.6 ^m				Edad: 25.3 ^d SD: 15'6 PMG: 8 ^h 46 ^m														
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	184	06.4	-15	36.8	232	26.3	+1	12.4	60 N	5	56	6	46	7	32	2	32	90	14 38 0
1	199	06.4		37.5	246	59.5	+0	57.0	58	53	40	23	32	87	39	4			
2	214	06.4		38.3	261	32.8		41.6	56	50	35	15	32	84	40	7			
3	229	06.4		39.1	276	06.0		26.2	54	48	30	08	33	80	41	10			
4	244	06.4		39.8	290	39.3	+0	10.9	52	46	26	7	02	33	77	43	11		
5	259	06.3	-15	40.6	305	12.7	-0	04.5	50	5	43	6	22	6	56	2	33	75	14 43 14
6	274	06.3	-15	41.3	319	46.0	-0	19.8	45	5	38	6	13	6	44	2	33	70	14 46 18
7	289	06.3		42.1	334	19.4		35.1	40	33	6	05	33	34	65	47	23		
8	304	06.3		42.9	348	52.8	-0	50.4	35	28	5	58	25	34	62	49	26		
9	319	06.3		43.6	3	26.2	-1	05.7	30	24	52	17	34	59	50	29			
10	334	06.3		44.4	17	59.6		21.0	20	14	41	6	03	35	53	52	35		
11	349	06.2	-15	45.1	32	33.0	-1	36.3	10 N	5	04	5	30	5	51	2	35	48	14 54 40
12	4	06.2	-15	45.9	47	06.4	-1	51.6	0	4	54	5	19	5	40	2	35	44	14 56 44
13	19	06.2		46.6	61	39.9	-2	06.8	10 S	41	5	07	29	36	39	14	58	48	
14	34	06.2		47.4	76	13.4		22.0	20	26	4	53	16	36	35	15	00	53	
15	49	06.2		48.2	90	46.8		37.2	30	4	06	37	5	02	37	29	02	59	
16	64	06.1		48.9	105	20.3	-2	52.4	35	3	54	27	4	54	37	26	04	62	
17	79	06.1	-15	49.7	119	53.8	-3	07.5	40	3	39	4	15	4	44	2	37	23	15 05 66
18	94	06.1	-15	50.4	134	27.3	-3	22.6	45	3	20	4	01	4	33	2	38	18	15 07 70
19	109	06.1		51.2	149	00.8		37.7	50	2	55	3	43	20	38	14	09	75	
20	124	06.1		51.9	163	34.3	-3	52.8	52	43	34	13	38	12	10	77			
21	139	06.0		52.7	178	07.7	-4	07.9	54	28	24	4	06	39	9	11	80		
22	154	06.0		53.4	192	41.2		22.9	56	2	11	13	3	58	39	6	12	83	
23	169	06.0		54.2	207	14.7		37.9	58	1	48	3	00	50	39	4	14	86	
24	184	06.0	-15	54.9	221	48.2	-4	52.8	60 S	1	18	2	45	3	39	2	40	0	15 15 90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 59.6 ^m		Mag: -4.5 PMG: 10 ^h 26 ^m		Mag: +0.8 PMG: 6 ^h 37 ^m		Mag: -2.0 PMG: 6 ^h 51 ^m		Mag: +0.5 PMG: 21 ^h 37 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	44	14.5	202	59.6	260	40.7	256	55.3	34	52.9
1	59	17.0	218	02.7	275	41.9	271	57.5	49	55.5
2	74	19.5	233	05.8	290	43.2	286	59.6	64	58.1
3	89	21.9	248	08.9	305	44.4	302	01.8	80	00.7
4	104	24.4	263	12.0	320	45.7	317	04.0	95	03.3
5	119	26.9	278	15.0	335	46.9	332	06.2	110	05.9
6	134	29.3	293	18.1	350	48.1	347	08.4	125	08.5
7	149	31.8	308	21.1	5	49.4	2	10.6	140	11.1
8	164	34.3	323	24.2	20	50.6	17	12.8	155	13.7
9	179	36.7	338	27.3	35	51.9	32	15.0	170	16.3
10	194	39.2	353	30.3	50	53.1	47	17.2	185	18.9
11	209	41.6	8	33.4	65	54.3	62	19.4	200	21.5
12	224	44.1	23	36.4	80	55.6	77	21.6	215	24.1
13	239	46.6	38	39.4	95	56.8	92	23.8	230	26.7
14	254	49.0	53	42.5	110	58.1	107	25.9	245	29.3
15	269	51.5	68	45.5	125	59.3	122	28.1	260	31.9
16	284	54.0	83	48.5	141	00.6	137	30.3	275	34.5
17	299	56.4	98	51.6	156	01.8	152	32.5	290	37.1
18	314	58.9	113	54.6	171	03.1	167	34.7	305	39.7
19	330	01.4	128	57.6	186	04.3	182	36.9	320	42.3
20	345	03.8	144	00.6	201	05.5	197	39.1	335	44.9
21	0	06.3	159	03.6	216	06.8	212	41.3	350	47.5
22	15	08.7	174	06.6	231	08.0	227	43.5	5	50.1
23	30	11.2	189	09.6	246	09.3	242	45.7	20	52.7
24	45	13.7	204	12.6	261	10.5	257	47.9	35	55.3
Dif	—		+30		+12		+22		+26	

ALMANAQUE NÁUTICO PERSEUS

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 11 ^h 43.7 ^m				Edad: 27.3 ^d PHE { 4 ^h : 56 ^h 1 12 ^h : 55 ^h 9 20 ^h : 55 ^h 8 R°: 45 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°		Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	184	05.3	-16	12.8	211	09.0	-10	40.3	60 N	6 00	6 51	7 37	5 32	92	14 39	2	
1	199	05.3		13.6	225	42.1 ¹⁴¹	-10	54.2 ¹³⁹	58	5 57	45	28	25	87	47	6	
2	214	05.2		14.3	240	15.2 ¹⁴¹	-11	08.0 ¹³⁸	56	54	39	20	19	83	14 55	9	
3	229	05.2		15.1	254	48.3 ¹⁴¹		21.8 ¹³⁸	54	51	34	12	13	80	15 01	13	
4	244	05.2		15.8	269	21.3 ¹⁴⁰		35.5 ¹³⁷	52	49	29	06	08	77	07	16	
5	259	05.1	-16	16.5	283	54.4 ¹⁴¹	-11	49.1 ¹³⁶	50	5 46	6 25	7 00	5 03	75	15 13	18	
6	274	05.1	-16	17.3	298	27.3 ¹³⁹	-12	02.7 ¹³⁶	45	5 40	6 15	6 47	4 53	70	15 24	23	
7	289	05.1		18.0	313	00.3 ¹⁴⁰		16.3 ¹³⁶	40	35	07	36	45	65	34	27	
8	304	05.0		18.7	327	33.2 ¹³⁹		29.8 ¹³⁵	35	30	6 00	27	38	62	42	31	
9	319	05.0		19.5	342	06.1 ¹³⁹		43.2 ¹³⁴	30	25	5 54	18	32	59	15 50	33	
10	334	05.0		20.2	356	39.0 ¹³⁹	-12	56.5 ¹³³	20	15	41	6 04	21	54	16 03	38	
11	349	04.9	-16	20.9	11	11.8 ¹³⁸	-13	09.8 ¹³³	10 N	5 05	5 30	5 52	4 12	49	16 14	42	
12	4	04.9	-16	21.7	25	44.6 ¹³⁸	-13	23.0 ¹³²	0	4 54	5 19	5 40	4 03	45	16 25	46	
13	19	04.8		22.4	40	17.3 ¹³⁷		36.2 ¹³²	10 S	41	5 06	28	3 55	41	35	50	
14	34	04.8		23.1	54	50.1 ¹³⁸	-13	49.2 ¹³⁰	20	25	4 52	16	46	36	16 47	54	
15	49	04.8		23.9	69	22.8 ¹³⁷	-14	02.3 ¹³¹	30	4 05	35	5 01	35	32	17 00	59	
16	64	04.7		24.6	83	55.4 ¹³⁶		15.2 ¹²⁹	35	3 52	25	4 52	30	28	08	62	
17	79	04.7	-16	25.3	98	28.0 ¹³⁶	-14	28.1 ¹²⁹	40	3 36	4 13	4 42	3 23	25	17 16	66	
18	94	04.7	-16	26.1	113	00.6 ¹³⁶	-14	40.9 ¹²⁸	45	3 17	3 58	4 31	3 15	22	17 27	69	
19	109	04.6		26.8	127	33.1 ¹³⁵	-14	53.6 ¹²⁷	50	2 51	39	16	06	17	39	75	
20	124	04.6		27.5	142	05.6 ¹³⁵	-15	06.3 ¹²⁷	52	38	30	10	3 02	14	45	77	
21	139	04.5		28.3	156	38.0 ¹³⁴		18.9 ¹²⁶	54	22	20	4 02	2 57	12	51	81	
22	154	04.5		29.0	171	10.5 ¹³⁵		31.4 ¹²⁵	56	2 04	3 08	3 54	52	9	17 58	84	
23	169	04.5		29.7	185	42.8 ¹³³		43.8 ¹²⁴	58	1 40	2 55	45	47	5	18 07	87	
24	184	04.4	-16	30.5	200	15.1 ¹³³	-15	56.1 ¹²³	60 S	1 05	2 39	3 34	2 40	2	18 16	93	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 20 ^h 51.7 ^m		Mag: -4.6 PMG: 10 ^h 16 ^m		Mag: +0.8 PMG: 6 ^h 33 ^m		Mag: -2.0 PMG: 6 ^h 44 ^m		Mag: +0.5 PMG: 21 ^h 28 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	46	12.8	205 23.4	-12 23.6	261 40.6	+15 56.7	258 40.6	+13 51.3	36 57.6	+1 05.1					
1	61	15.3	220 26.3	22.7	276 41.9	56.4	273 42.8	51.2	52 00.2	05.1					
2	76	17.7	235 29.2	21.9	291 43.1	56.1	288 45.1	51.1	67 02.8	05.0					
3	91	20.2	250 32.0	21.1	306 44.4	55.7	303 47.3	51.0	82 05.4	05.0					
4	106	22.7	265 34.9	20.2	321 45.6	55.4	318 49.5	50.9	97 07.9	04.9					
5	121	25.1	280 37.8	-12 19.4	336 46.9	+15 55.0	333 51.7	+13 50.9	112 10.5	+1 04.9					
6	136	27.6	295 40.7	-12 18.5	351 48.2	+15 54.7	348 53.9	+13 50.8	127 13.1	+1 04.8					
7	151	30.1	310 43.6	17.7	6 49.4	54.4	3 56.1	50.7	142 15.7	04.8					
8	166	32.5	325 46.4	16.8	21 50.7	54.0	18 58.3	50.6	157 18.3	04.7					
9	181	35.0	340 49.3	16.0	36 52.0	53.7	34 00.5	50.5	172 20.9	04.7					
10	196	37.5	355 52.2	15.2	51 53.2	53.4	49 02.7	50.5	187 23.5	04.6					
11	211	39.9	10 55.0	-12 14.3	66 54.5	+15 53.0	64 04.9	+13 50.4	202 26.1	+1 04.6					
12	226	42.4	25 57.9	-12 13.5	81 55.7	+15 52.7	79 07.1	+13 50.3	217 28.7	+1 04.5					
13	241	44.8	41 00.7	12.7	96 57.0	52.3	94 09.3	50.2	232 31.3	04.5					
14	256	47.3	56 03.6	11.8	111 58.3	52.0	109 11.5	50.1	247 33.9	04.4					
15	271	49.8	71 06.4	11.0	126 59.5	51.7	124 13.7	50.1	262 36.5	04.4					
16	286	52.2	86 09.3	10.2	142 00.8	51.3	139 15.9	50.0	277 39.1	04.3					
17	301	54.7	101 12.1	-12 09.4	157 02.1	+15 51.0	154 18.1	+13 49.9	292 41.7	+1 04.3					
18	316	57.2	116 14.9	-12 08.5	172 03.3	+15 50.6	169 20.3	+13 49.8	307 44.3	+1 04.2					
19	331	59.6	131 17.8	07.7	187 04.6	50.3	184 22.5	49.7	322 46.8	04.2					
20	347	02.1	146 20.6	06.9	202 05.9	50.0	199 24.7	49.7	337 49.4	04.2					
21	2	04.6	161 23.4	06.1	217 07.1	49.6	214 26.9	49.6	352 52.0	04.1					
22	17	07.0	176 26.2	05.3	232 08.4	49.3	229 29.1	49.5	7 54.6	04.1					
23	32	09.5	191 29.0	04.5	247 09.7	49.0	244 31.3	49.4	22 57.2	04.0					
24	47	12.0	206 31.9	-12 03.6	262 10.9	+15 48.6	259 33.6	+13 49.3	37 59.8	+1 04.0					
Dif	—		+29	+8	+13		-3		+22		-1	+26			

UT	SOL			● LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1 PMG: 11 ^h 43.7 ^m			Edad: 28.3 ^d PHE { 4 ^h : 55/6 12 ^h : 55/5 20 ^h : 55/3 R°: 49 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	° /	° /	° /	° /		° /		°	h m	h m	h m	h m m		h m m			
0	184	04.4	-16	200	15.1	-15	56.1	60 N	15 47	16 34	17 24	7 04 96		14 41 6			
1	199	04.4		214	47.4	-16	08.4	58	15 56	40	27	6 52 90		14 53 12			
2	214	04.3		229	19.7		20.6	56	16 05	46	31	42 85		15 04 16			
3	229	04.3		243	51.9		32.7	54	13	51	34	33 82		14 19			
4	244	04.3		258	24.0		44.8	52	19	16 56	36	25 79		23 21			
5	259	04.2	-16	272	56.1	-16	56.7	50	16 26	17 00	17 39	6 18 76		15 31 24			
6	274	04.2	-16	287	28.2	-17	08.6	45	16 39	17 10	17 45	6 03 71		15 47 29			
7	289	04.1		302	00.2		20.4	40	16 50	19	51	5 50 67		16 01 33			
8	304	04.1		316	32.2		32.1	35	17 00	26	17 56	40 63		13 35			
9	319	04.0		331	04.1		43.7	30	08	33	18 01	31 60		23 38			
10	334	04.0		345	36.0	-17	55.2	20	22	45	12	15 56		41 42			
11	349	03.9	-16	0	07.8	-18	06.7	10 N	17 35	17 57	18 22	5 01 52		16 56 46			
12	4	03.9	-16	14	39.6	-18	18.0	0	17 47	18 09	18 34	4 48 49		17 11 49			
13	19	03.9		29	11.3		29.3	10 S	17 59	21	18 47	36 45		25 53			
14	34	03.8		43	43.0		40.5	20	18 13	36	19 03	22 41		41 57			
15	49	03.8		58	14.7	-18	51.6	30	28	18 54	24	4 07 36		17 59 61			
16	64	03.7		72	46.3	-19	02.5	35	37	19 04	37	3 58 34		18 10 63			
17	79	03.7	-16	87	17.8	-19	13.4	40	18 47	19 17	19 53	3 48 31		18 22 66			
18	94	03.6	-16	101	49.3	-19	24.2	45	18 59	19 32	20 14	3 37 26		18 36 70			
19	109	03.6		116	20.8		35.0	50	19 14	19 51	40	23 21		18 54 75			
20	124	03.5		130	52.2		45.6	52	21	20 01	20 54	16 19		19 02 78			
21	139	03.5		145	23.5	-19	56.1	54	28	11	21 10	09 16		12 80			
22	154	03.4		159	54.8	-20	06.5	56	37	23	30	3 01 13		22 85			
23	169	03.4		174	26.1		16.8	58	46	38	21 56	2 52 9		34 89			
24	184	03.3	-16	188	57.3	-20	27.1	60 S	19 58	20 55	22 36	2 42 4		19 49 95			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG 20 ^h 47.8 ^m		Mag: -4.6 PMG: 10 ^h 12 ^m		Mag: +0.8 PMG: 6 ^h 31 ^m		Mag: -2.0 PMG: 6 ^h 41 ^m		Mag: +0.5 PMG: 21 ^h 24 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /							
0	47	12.0	206	31.9	-12	03.6	262	10.9	+15	48.6							
1	62	14.4	221	34.7		02.8	277	12.2		48.3							
2	77	16.9	236	37.5		02.0	292	13.5		47.9							
3	92	19.3	251	40.3		01.2	307	14.7		47.6							
4	107	21.8	266	43.0	-12	00.4	322	16.0		47.3							
5	122	24.3	281	45.8	-11	59.6	337	17.3	+15	46.9							
6	137	26.7	296	48.6	-11	58.8	352	18.6	+15	46.6							
7	152	29.2	311	51.4		58.0	7	19.8		46.2							
8	167	31.7	326	54.2		57.2	22	21.1		45.9							
9	182	34.1	341	57.0		56.4	37	22.4		45.6							
10	197	36.6	356	59.7		55.6	52	23.7		45.2							
11	212	39.1	12	02.5	-11	54.8	67	24.9	+15	44.9							
12	227	41.5	27	05.3	-11	54.0	82	26.2	+15	44.6							
13	242	44.0	42	08.0		53.2	97	27.5		44.2							
14	257	46.4	57	10.8		52.5	112	28.7		43.9							
15	272	48.9	72	13.5		51.7	127	30.0		43.5							
16	287	51.4	87	16.3		50.9	142	31.3		43.2							
17	302	53.8	102	19.0	-11	50.1	157	32.6	+15	42.9							
18	317	56.3	117	21.7	-11	49.3	172	33.9	+15	42.5							
19	332	58.8	132	24.5		48.5	187	35.1		42.2							
20	348	01.2	147	27.2		47.8	202	36.4		41.9							
21	3	03.7	162	29.9		47.0	217	37.7		41.5							
22	18	06.2	177	32.7		46.2	232	39.0		41.2							
23	33	08.6	192	35.4		45.4	247	40.2		40.8							
24	48	11.1	207	38.1	-11	44.7	262	41.5	+15	40.5							
Dif	—		+28		+8		+13		-3		+22		-1		+26		0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 11 ^h 43.8 ^m			Edad: 29.3 ^d PHE { 4 ^h : 55/2 12 ^h : 55/0 20 ^h : 54/9 PMG: 11 ^h 47 ^m Rº: 50 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	03.3	-16	47.8	188	57.3	-20	27.1	60 N	6 05	6 55	7 43	8 38	93	14 45	10	
1	199	03.3		48.5	203	28.4	121	37.2	58	6 01	49	33	21	86	15 03	16	
2	214	03.2		49.2	217	59.5	121	47.2	56	5 58	43	24	8 06	81	18 21		
3	229	03.2		50.0	232	30.6	121	57.1	54	55	37	16	7 53	78	32	22	
4	244	03.1		50.7	247	01.6	120	06.9	52	52	32	09	42	75	43	27	
5	259	03.1	-16	51.4	261	32.5	119	16.6	50	5 49	6 28	7 03	7 33	72	15 53	30	
6	274	03.0	-16	52.1	276	03.4	119	26.3	45	5 43	6 18	6 49	7 12	68	16 15	34	
7	289	03.0		52.8	290	34.3	119	35.8	40	37	09	38	6 56	64	32	37	
8	304	02.9		53.5	305	05.1	118	45.2	35	32	6 02	29	42	61	16 47	39	
9	319	02.9		54.2	319	35.8	117	54.5	30	26	5 55	20	30	59	17 00	41	
10	334	02.8		55.0	334	06.5	117	03.6	20	16	42	6 05	6 09	56	22	45	
11	349	02.8	-16	55.7	348	37.2	117	12.7	10 N	5 05	5 31	5 53	5 52	52	17 41	47	
12	4	02.7	-16	56.4	3	07.8	116	21.7	0	4 54	5 19	5 40	5 35	50	17 59	50	
13	19	02.7		57.1	17	38.4	116	30.5	10 S	40	5 06	28	19	46	18 17	52	
14	34	02.6		57.8	32	08.9	115	39.3	20	24	4 51	5 15	5 02	43	36	55	
15	49	02.5		58.5	46	39.3	114	47.9	30	4 03	34	4 59	4 42	39	18 58	59	
16	64	02.5		59.2	61	09.7	114	56.4	35	3 50	23	50	30	37	19 12	60	
17	79	02.4	-16	59.9	75	40.1	114	04.9	40	3 34	4 10	4 40	4 17	34	19 27	62	
18	94	02.4	-17	00.6	90	10.4	113	13.1	45	3 13	3 55	4 28	4 02	30	19 45	66	
19	109	02.3		01.3	104	40.7	113	21.3	50	2 47	36	13	3 43	26	20 08	69	
20	124	02.3		02.0	119	10.9	112	29.4	52	33	26	4 06	34	23	19 71		
21	139	02.2		02.8	133	41.1	112	37.3	54	2 17	16	3 59	24	21	31	74	
22	154	02.1		03.5	148	11.2	111	45.2	56	1 57	3 03	50	13	17	20 45	78	
23	169	02.1		04.2	162	41.3	111	52.9	58	1 31	2 49	40	3 00	13	21 02	83	
24	184	02.0	-17	04.9	177	11.4	111	00.5	60 S	0 51	2 32	3 29	2 45	7	21 22	90	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 20 ^h 43.9 ^m		Mag: -4.6 PMG: 10 ^h 08 ^m		Mag: +0.8 PMG: 6 ^h 29 ^m		Mag: -2.1 PMG: 6 ^h 37 ^m		Mag: +0.5 PMG: 21 ^h 20 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	48	11.1	207	38.1	-11	44.7	262	41.5	+15	40.5	260	26.6	+13	47.5	39	02.0	+1	02.9
1	63	13.6	222	40.8		43.9	277	42.8		40.2	275	28.8		47.4	54	04.6		02.8
2	78	16.0	237	43.5		43.1	292	44.1		39.8	290	31.0		47.3	69	07.2		02.8
3	93	18.5	252	46.2		42.4	307	45.4		39.5	305	33.3		47.2	84	09.7		02.7
4	108	20.9	267	48.9		41.6	322	46.6		39.2	320	35.5		47.1	99	12.3		02.7
5	123	23.4	282	51.6	-11	40.9	337	47.9	+15	38.8	335	37.7	+13	47.1	114	14.9	+1	02.6
6	138	25.9	297	54.3	-11	40.1	352	49.2	+15	38.5	350	39.9	+13	47.0	129	17.5	+1	02.6
7	153	28.3	312	57.0		39.3	7	50.5		38.2	5	42.1		46.9	144	20.1		02.5
8	168	30.8	327	59.7		38.6	22	51.8		37.8	20	44.3		46.8	159	22.7		02.5
9	183	33.3	343	02.3		37.8	37	53.1		37.5	35	46.6		46.8	174	25.3		02.4
10	198	35.7	358	05.0		37.1	52	54.3		37.1	50	48.8		46.7	189	27.9		02.4
11	213	38.2	13	07.7	-11	36.3	67	55.6	+15	36.8	65	51.0	+13	46.6	204	30.5	+1	02.4
12	228	40.7	28	10.3	-11	35.6	82	56.9	+15	36.5	80	53.2	+13	46.5	219	33.0	+1	02.3
13	243	43.1	43	13.0		34.8	97	58.2		36.1	95	55.4		46.5	234	35.6		02.3
14	258	45.6	58	15.7		34.1	112	59.5		35.8	110	57.6		46.4	249	38.2		02.2
15	273	48.1	73	18.3		33.3	128	00.8		35.5	125	59.9		46.3	264	40.8		02.2
16	288	50.5	88	21.0		32.6	143	02.1		35.1	141	02.1		46.2	279	43.4		02.1
17	303	53.0	103	23.6	-11	31.9	158	03.3	+15	34.8	156	04.3	+13	46.2	294	46.0	+1	02.1
18	318	55.4	118	26.3	-11	31.1	173	04.6	+15	34.5	171	06.5	+13	46.1	309	48.6	+1	02.0
19	333	57.9	133	28.9		30.4	188	05.9		34.1	186	08.7		46.0	324	51.2		02.0
20	349	00.4	148	31.5		29.7	203	07.2		33.8	201	10.9		45.9	339	53.7		02.0
21	4	02.8	163	34.2		28.9	218	08.5		33.4	216	13.2		45.9	354	56.3		01.9
22	19	05.3	178	36.8		28.2	233	09.8		33.1	231	15.4		45.8	9	58.9		01.9
23	34	07.8	193	39.4		27.5	248	11.1		32.8	246	17.6		45.7	25	01.5		01.8
24	49	10.2	208	42.0	-11	26.7	263	12.4	+15	32.4	261	19.8	+13	45.6	40	04.1	+1	01.8
Dif	—		+27		+7		+13		-3		+22		-1		+26			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16 ^h 1 PMG: 11 ^h 43.9 ^m				Edad: 30.3 ^d SD: 14 ^h 9 PMG: 12 ^h 37 ^m														
	PHE {		R°: 52 ^m																
	hG ☉	Dec	hG ☾	Dif	Dec	Dif				Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'		°	h m	h m	h m	h m m		h m m					
0	184	02.0	-17	04.9	177	11.4	-24 00.5	60 N	15 42	16 29	17 20	10 11 87		14 55 22					
1	199	02.0		05.6	191	41.4	08.0	58	15 52	36	24	9 47 79		15 19 30					
2	214	01.9		06.3	206	11.3	15.3	56	16 01	42	27	27 75		39 34					
3	229	01.8		07.0	220	41.2	22.6	54	09	48	31	9 11 72		15 56 37					
4	244	01.8		07.7	235	11.1	29.7	52	16	53	34	8 57 70		16 10 39					
5	259	01.7	-17	08.4	249	40.9	-24 36.7	50	16 23	16 58	17 37	8 45 68		16 23 40					
6	274	01.7	-17	09.1	264	10.7	-24 43.6	45	16 37	17 08	17 43	8 20 64		16 49 43					
7	289	01.6		09.8	278	40.4	50.3	40	48	17	49	8 00 62		17 09 46					
8	304	01.5		10.5	293	10.1	-24 57.0	35	16 58	25	17 55	7 43 61		26 47					
9	319	01.5		11.2	307	39.8	-25 03.5	30	17 07	32	18 00	29 59		17 41 48					
10	334	01.4		11.9	322	09.4	09.8	20	22	45	11	7 05 56		18 07 49					
11	349	01.4	-17	12.6	336	39.0	-25 16.1	10 N	17 35	17 57	18 22	6 44 54		18 28 52					
12	4	01.3	-17	13.3	351	08.6	-25 22.2	0	17 47	18 09	18 34	6 25 52		18 49 53					
13	19	01.2		14.0	5	38.1	28.2	0 S	18 00	22	18 48	6 05 51		19 09 55					
14	34	01.2		14.7	20	07.5	34.1	20	14	37	19 05	5 45 48		31 56					
15	49	01.1		15.4	34	37.0	39.9	30	29	18 55	26	21 45		19 57 57					
16	64	01.0		16.1	49	06.4	45.5	35	39	19 06	40	5 07 44		20 12 58					
17	79	01.0	-17	16.8	63	35.8	-25 51.0	40	18 49	19 19	19 56	4 51 42		20 29 60					
18	94	00.9	-17	17.5	78	05.1	-25 56.4	45	19 02	19 35	20 17	4 32 39		20 51 61					
19	109	00.8		18.2	92	34.4	-26 01.6	50	17	19 55	45	4 09 35		21 17 64					
20	124	00.8		18.9	107	03.7	06.7	52	24	20 05	20 59	3 57 34		30 65					
21	139	00.7		19.6	121	32.9	11.7	54	32	16	21 16	45 31		21 45 66					
22	154	00.6		20.3	136	02.1	16.5	56	41	29	21 38	30 28		22 03 68					
23	169	00.6		20.9	150	31.3	21.3	58	19 51	20 44	22 06	3 13 23		25 71					
24	184	00.5	-17	21.6	165	00.5	-26 25.9	60 S	20 03	21 02	22 54	2 52 16		22 52 77					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 20 ^h 39.9 ^m		Mag: -4.7 PMG: 10 ^h 03 ^m		Mag: +0.7 PMG: 6 ^h 27 ^m		Mag: -2.1 PMG: 6 ^h 34 ^m		Mag: +0.5 PMG: 21 ^h 16 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	49	10.2	208	42.0	-11	26.7	263	12.4	+15	32.4	261	19.8	+13	45.6	40	04.1	+1	01.8	
1	64	12.7	223	44.7		26.0	278	13.7		32.1	276	22.0		45.6	55	06.7		01.7	
2	79	15.2	238	47.3		25.3	293	14.9		31.8	291	24.3		45.5	70	09.3		01.7	
3	94	17.6	253	49.9		24.6	308	16.2		31.4	306	26.5		45.4	85	11.8		01.6	
4	109	20.1	268	52.5		23.9	323	17.5		31.1	321	28.7		45.3	100	14.4		01.6	
5	124	22.5	283	55.1	-11	23.1	338	18.8	+15	30.8	336	30.9	+13	45.3	115	17.0	+1	01.6	
6	139	25.0	298	57.7	-11	22.4	353	20.1	+15	30.4	351	33.2	+13	45.2	130	19.6	+1	01.5	
7	154	27.5	314	00.3		21.7	8	21.4		30.1	6	35.4		45.1	145	22.2		01.5	
8	169	29.9	329	02.9		21.0	23	22.7		29.8	21	37.6		45.0	160	24.8		01.4	
9	184	32.4	344	05.4		20.3	38	24.0		29.4	36	39.8		45.0	175	27.3		01.4	
10	199	34.9	359	08.0		19.6	53	25.3		29.1	51	42.0		44.9	190	29.9		01.3	
11	214	37.3	14	10.6	-11	18.9	68	26.6	+15	28.8	66	44.3	+13	44.8	205	32.5	+1	01.3	
12	229	39.8	29	13.2	-11	18.2	83	27.9	+15	28.4	81	46.5	+13	44.7	220	35.1	+1	01.3	
13	244	42.3	44	15.7		17.5	98	29.2		28.1	96	48.7		44.7	235	37.7		01.2	
14	259	44.7	59	18.3		16.8	113	30.5		27.7	111	50.9		44.6	250	40.3		01.2	
15	274	47.2	74	20.9		16.1	128	31.8		27.4	126	53.2		44.5	265	42.9		01.1	
16	289	49.7	89	23.4		15.4	143	33.1		27.1	141	55.4		44.4	280	45.4		01.1	
17	304	52.1	104	26.0	-11	14.7	158	34.4	+15	26.7	156	57.6	+13	44.4	295	48.0	+1	01.0	
18	319	54.6	119	28.5	-11	14.0	173	35.7	+15	26.4	171	59.8	+13	44.3	310	50.6	+1	01.0	
19	334	57.0	134	31.1		13.3	188	37.0		26.1	187	02.1		44.2	325	53.2		01.0	
20	349	59.5	149	33.6		12.6	203	38.3		25.7	202	04.3		44.1	340	55.8		00.9	
21	5	02.0	164	36.1		11.9	218	39.6		25.4	217	06.5		44.1	355	58.4		00.9	
22	20	04.4	179	38.7		11.2	233	40.9		25.1	232	08.7		44.0	11	00.9		00.8	
23	35	06.9	194	41.2		10.6	248	42.2		24.7	247	11.0		43.9	26	03.5		00.8	
24	50	09.4	209	43.7	-11	09.9	263	43.5	+15	24.4	262	13.2	+13	43.8	41	06.1	+1	00.7	
Dif	—		+26		+7		+13		-3		+22		-1		+26		0		

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG:11 ^h 44.0 ^m				Edad: 1.7 ^d SD: 14:8 PMG: 13 ^h 28 ^m														
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	184	00.5	-17	21.6	165	00.5	-26	25.9	44	58	60 N	6 09	7 00	7 48	11 37	62	15 16	44	
1	199	00.4		22.3	179	29.6		30.3	43	58		05	6 53	37	11 05	60	15 48	47	
2	214	00.4		23.0	193	58.7		34.6	42	56		6 01	47	28	10 41	58	16 12	48	
3	229	00.3		23.7	208	27.8		38.8	42	54		5 58	41	20	21 58		31 49		
4	244	00.2		24.4	222	56.9		42.9	41	52		55	36	13	10 05	57	16 48	49	
5	259	00.2	-17	25.1	237	25.9	-26	46.8	39	50		5 52	6 31	7 06	9 51	57	17 02	50	
6	274	00.1	-17	25.8	251	54.9	-26	50.6	38	45		5 45	6 21	6 52	9 23	55	17 31	50	
7	289	00.0		26.5	266	23.9		54.3	37	40		39	12	40	9 01	54	17 53	51	
8	304	00.0		27.2	280	52.9	-26	57.8	35	35		33	6 04	30	8 42	54	18 12	51	
9	318	59.9		27.9	295	21.9	-27	01.2	34	30		28	5 57	22	26 54		28 51		
10	333	59.8		28.5	309	50.8		04.4	32	20		17	43	6 07	8 00	53	18 55	51	
11	348	59.7	-17	29.2	324	19.7	-27	07.6	32	10 N		5 06	5 31	5 53	7 37	52	19 18	52	
12	3	59.7	-17	29.9	338	48.6	-27	10.6	30	0		4 54	5 19	5 40	7 15	52	19 40	52	
13	18	59.6		30.6	353	17.5		13.4	28	10 S		40	5 06	28	6 54	51	20 02	52	
14	33	59.5		31.3	7	46.4		16.1	27	20		23	4 51	5 14	31 50		25 52		
15	48	59.5		32.0	22	15.3		18.7	26	30		4 01	32	4 58	6 05	49	20 53	51	
16	63	59.4		32.7	36	44.2		21.2	25	35		3 48	21	49	5 50	48	21 09	51	
17	78	59.3	-17	33.3	51	13.0	-27	23.5	23	40		3 31	4 08	4 38	5 32	47	21 28	51	
18	93	59.2	-17	34.0	65	41.9	-27	25.7	22	45		3 10	3 52	4 26	5 10	46	21 50	52	
19	108	59.2		34.7	80	10.7		27.7	20	50		2 42	32	10	4 43	44	22 19	51	
20	123	59.1		35.4	94	39.5		29.6	19	52		28	22	4 03	29 44		33 51		
21	138	59.0		36.1	109	08.4		31.4	18	54		2 11	3 11	3 55	4 14	42	22 50	51	
22	153	58.9		36.8	123	37.2		33.0	16	56		1 50	2 59	46	3 56	40	23 10	50	
23	168	58.9		37.4	138	06.0		34.5	15	58		1 21	44	36	34 38		23 34	50	
24	183	58.8	-17	38.1	152	34.8	-27	35.9	14	60 S		0 33	2 26	3 24	3 06	32	** ** *	**	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 36.0 ^m		Mag: -4.7 PMG: 9 ^h 59 ^m		Mag: +0.7 PMG: 6 ^h 25 ^m		Mag: -2.1 PMG: 6 ^h 30 ^m		Mag: +0.5 PMG: 21 ^h 12 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	50	09.4	209	43.7	-11	09.9	263	43.5	+15	24.4
1	65	11.8	224	46.3		09.2	278	44.8		24.1
2	80	14.3	239	48.8		08.5	293	46.1		23.7
3	95	16.8	254	51.3		07.8	308	47.4		23.4
4	110	19.2	269	53.8		07.2	323	48.7		23.1
5	125	21.7	284	56.3	-11	06.5	338	50.0	+15	22.7
6	140	24.2	299	58.8	-11	05.8	353	51.3	+15	22.4
7	155	26.6	315	01.3		05.2	8	52.6		22.1
8	170	29.1	330	03.8		04.5	23	53.9		21.7
9	185	31.5	345	06.3		03.8	38	55.2		21.4
10	200	34.0	0	08.8		03.2	53	56.5		21.1
11	215	36.5	15	11.3	-11	02.5	68	57.8	+15	20.7
12	230	38.9	30	13.7	-11	01.9	83	59.1	+15	20.4
13	245	41.4	45	16.2		01.2	99	00.4		20.1
14	260	43.9	60	18.7	-11	00.5	114	01.7		19.7
15	275	46.3	75	21.1	-10	59.9	129	03.0		19.4
16	290	48.8	90	23.6		59.2	144	04.3		19.1
17	305	51.3	105	26.1	-10	58.6	159	05.7	+15	18.7
18	320	53.7	120	28.5	-10	58.0	174	07.0	+15	18.4
19	335	56.2	135	31.0		57.3	189	08.3		18.1
20	350	58.7	150	33.4		56.7	204	09.6		17.7
21	6	01.1	165	35.9		56.0	219	10.9		17.4
22	21	03.6	180	38.3		55.4	234	12.2		17.1
23	36	06.0	195	40.7		54.8	249	13.5		16.7
24	51	08.5	210	43.2	-10	54.1	264	14.8	+15	16.4
Dif	—		+25		+7		+13		-3	
									+22	
									-1	
									+26	

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 44.1 ^m				Edad: 2.7 ^d SD: 14/8 PMG: 14 ^h 19 ^m						PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/1 R°: 53 ^m					
	hG ☉	Dec	hG ☾	Dif	Dec	Dif										
h	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m m	h m m	h m m			
0	183 58.8	-17 38.1	152 34.8	99	-27 35.9	12	60 N	15 37	16 25	17 17	12 39 35	16 00 74				
1	198 58.7	38.8	167 03.7	98	37.1	11	58	48	33	21	12 05 40	16 35 68				
2	213 58.6	39.5	181 32.5	98	38.2	9	56	15 57	39	24	11 39 43	17 00 66				
3	228 58.6	40.2	196 01.3	98	39.1	9	54	16 06	45	28	19 45	20 6				
4	243 58.5	40.8	210 30.1	98	40.0	9	52	13	50	31	11 02 46	37 62				
5	258 58.4	-17 41.5	224 59.0	99	-27 40.6	6	50	16 20	16 55	17 34	10 48 46	17 52 61				
6	273 58.3	-17 42.2	239 27.8	98	-27 41.2	6	45	16 34	17 06	17 41	10 18 48	18 21 59				
7	288 58.2	42.9	253 56.7	99	41.6	4	40	46	15	48	9 55 50	18 44 58				
8	303 58.2	43.5	268 25.5	98	41.9	3	35	16 57	23	54	36 50	19 03 57				
9	318 58.1	44.2	282 54.4	99	42.0	1	30	17 05	31	17 59	9 20 51	19 56				
10	333 58.0	44.9	297 23.3	99	42.0	0	20	21	44	18 11	8 53 51	19 46 55				
11	348 57.9	-17 45.6	311 52.2	99	-27 41.9	1	10 N	17 35	17 57	18 22	8 29 52	20 10 53				
12	3 57.8	-17 46.2	326 21.1	99	-27 41.6	3	0	17 48	18 09	18 35	8 07 53	20 32 52				
13	18 57.8	46.9	340 50.0	99	41.2	4	10 S	18 01	23	18 49	7 45 53	20 54 50				
14	33 57.7	47.6	355 18.9	99	40.7	5	20	15	38	19 06	7 21 54	21 17 50				
15	48 57.6	48.3	9 47.9	100	40.0	7	30	31	18 57	28	6 54 54	21 44 48				
16	63 57.5	48.9	24 16.9	100	39.2	8	35	41	19 08	42	38 55	22 00 47				
17	78 57.4	-17 49.6	38 45.9	100	-27 38.3	9	40	18 52	19 22	19 59	6 19 55	22 19 45				
18	93 57.4	-17 50.3	53 14.9	100	-27 37.2	11	45	19 05	19 38	20 21	5 56 56	22 42 43				
19	108 57.3	50.9	67 43.9	100	36.0	12	50	20	19 59	20 50	27 56	23 10 41				
20	123 57.2	51.6	82 13.0	101	34.6	14	52	28	20 09	21 05	5 13 57	24 40				
21	138 57.1	52.3	96 42.0	100	33.2	14	54	36	21	23	4 56 57	23 41 37				
22	153 57.0	52.9	111 11.1	101	31.6	16	56	46	34	21 46	36 58	** ** **				
23	168 56.9	53.6	125 40.3	102	29.8	18	58	19 56	20 49	22 17	4 12 58	** ** **				
24	183 56.9	-17 54.3	140 09.4	101	-27 27.9	19	60 S	20 08	21 09	23 25	3 38 61	0 08 49				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 32.1 ^m		Mag: -4.7 PMG: 9 ^h 56 ^m		Mag: +0.7 PMG: 6 ^h 22 ^m		Mag: -2.1 PMG: 6 ^h 27 ^m		Mag: +0.5 PMG: 21 ^h 08 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	51 08.5	210 43.2	-10 54.1	264 14.8	+15 16.4	263 06.7	+13 42.1	42 08.1	+0 59.7	
1	66 11.0	225 45.6	53.5	279 16.1	16.1	278 08.9	42.1	57 10.6	59.7	
2	81 13.4	240 48.0	52.9	294 17.5	15.7	293 11.2	42.0	72 13.2	59.7	
3	96 15.9	255 50.4	52.2	309 18.8	15.4	308 13.4	41.9	87 15.8	59.6	
4	111 18.4	270 52.9	51.6	324 20.1	15.1	323 15.6	41.8	102 18.4	59.6	
5	126 20.8	285 55.3	-10 51.0	339 21.4	+15 14.8	338 17.9	+13 41.8	117 20.9	+0 59.5	
6	141 23.3	300 57.7	-10 50.4	354 22.7	+15 14.4	353 20.1	+13 41.7	132 23.5	+0 59.5	
7	156 25.8	316 00.1	49.7	9 24.0	14.1	8 22.3	41.6	147 26.1	59.5	
8	171 28.2	331 02.5	49.1	24 25.3	13.8	23 24.6	41.6	162 28.7	59.4	
9	186 30.7	346 04.9	48.5	39 26.7	13.4	38 26.8	41.5	177 31.3	59.4	
10	201 33.2	1 07.3	47.9	54 28.0	13.1	53 29.1	41.4	192 33.8	59.3	
11	216 35.6	16 09.7	-10 47.3	69 29.3	+15 12.8	68 31.3	+13 41.4	207 36.4	+0 59.3	
12	231 38.1	31 12.1	-10 46.7	84 30.6	+15 12.4	83 33.5	+13 41.3	222 39.0	+0 59.3	
13	246 40.5	46 14.4	46.1	99 31.9	12.1	98 35.8	41.2	237 41.6	59.2	
14	261 43.0	61 16.8	45.5	114 33.3	11.8	113 38.0	41.1	252 44.2	59.2	
15	276 45.5	76 19.2	44.8	129 34.6	11.4	128 40.2	41.1	267 46.7	59.1	
16	291 47.9	91 21.6	44.2	144 35.9	11.1	143 42.5	41.0	282 49.3	59.1	
17	306 50.4	106 23.9	-10 43.6	159 37.2	+15 10.8	158 44.7	+13 40.9	297 51.9	+0 59.1	
18	321 52.9	121 26.3	-10 43.0	174 38.5	+15 10.4	173 46.9	+13 40.9	312 54.5	+0 59.0	
19	336 55.3	136 28.6	42.5	189 39.9	10.1	188 49.2	40.8	327 57.0	59.0	
20	351 57.8	151 31.0	41.9	204 41.2	09.8	203 51.4	40.7	342 59.6	58.9	
21	7 00.3	166 33.3	41.3	219 42.5	09.5	218 53.7	40.7	358 02.2	58.9	
22	22 02.7	181 35.7	40.7	234 43.8	09.1	233 55.9	40.6	13 04.8	58.9	
23	37 05.2	196 38.0	40.1	249 45.1	08.8	248 58.1	40.5	28 07.3	58.8	
24	52 07.6	211 40.4	-10 39.5	264 46.5	+15 08.5	264 00.4	+13 40.5	43 09.9	+0 58.8	
Dif	—	+24	+6	+13	-3	+22	-1	+26	0	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 16/2 PMG: 11 ^h 44.3 ^m			Edad: 3.7 ^d SD: 14/7 PMG: 15 ^h 10 ^m PHE { 4 ^h : 54/1 12 ^h : 54/1 20 ^h : 54/1 R°: 50 ^m																			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Náutico	Civil		Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m				
0	183	56.9	-17	54.3	140	09.4	-27	27.9	20	60 N	6	13	7	53	13	13	15	17	12	87			
1	198	56.8		54.9	154	38.6		25.9	21	58	09	6	57	42	12	43	23	17	42	79			
2	213	56.7		55.6	169	07.8		23.8	23	56	05		50	32	21	27		18	04	75			
3	228	56.6		56.3	183	37.0		21.5	24	54	6	01	44	24	12	02	30		22	72			
4	243	56.5		56.9	198	06.3		19.1	24	52	5	58	39	16	11	47	32		38	69			
5	258	56.4	-17	57.6	212	35.6	-27	16.6	25	50	5	55	6	34	7	09	11	33	34	18	51	67	
6	273	56.3	-17	58.3	227	04.9	-27	13.9	27	45	5	48	6	23	6	55	11	05	38	19	19	63	
7	288	56.2		58.9	241	34.3		11.2	27	40	41		14	43	10	43	40		40	60			
8	303	56.2	-17	59.6	256	03.7		08.2	30	35	35	6	06	32		25	42		19	58	58		
9	318	56.1	-18	00.3	270	33.2		05.2	30	30	29	5	58	23	10	09	44		20	13	57		
10	333	56.0		00.9	285	02.6	-27	02.0	32	20	18		44	6	08	9	43	45		20	39	54	
11	348	55.9	-18	01.6	299	32.1	-26	58.7	33	10 N	5	06	5	32	5	54	9	20	47		21	02	51
12	3	55.8	-18	02.2	314	01.7	-26	55.3	34	0	4	54	5	19	5	41	8	58	50		21	22	49
13	18	55.7		02.9	328	31.3		51.7	36	10 S	39	5	05	28		37	51		21	43	46		
14	33	55.6		03.6	343	00.9		48.1	36	20	22	4	50	5	13	8	14	53		22	05	44	
15	48	55.5		04.2	357	30.6		44.2	39	30	4	00	31	4	57	7	47	55		31	40		
16	63	55.4		04.9	12	00.3		40.3	39	35	3	46	20	47		31	57		22	46	39		
17	78	55.4	-18	05.5	26	30.0	-26	36.3	40	40	3	29	4	06	4	36	7	13	58		23	03	37
18	93	55.3	-18	06.2	40	59.8	-26	32.1	42	45	3	07	3	50	4	23	6	50	61		23	24	33
19	108	55.2		06.9	55	29.7		27.8	43	50	2	38	29	07		22	64		23	50	30		
20	123	55.1		07.5	69	59.5		23.3	45	52	23		19	4	00	6	08	65		***	***	***	
21	138	55.0		08.2	84	29.5		18.8	45	54	2	05	3	07	3	52	5	52	67		***	***	***
22	153	54.9		08.8	98	59.4		14.1	47	56	1	42	2	54		33	70		0	00	34		
23	168	54.8		09.5	113	29.4		09.3	48	58	1	11	38	32		5	09	74		24	30		
24	183	54.7	-18	10.1	127	59.5	-26	04.4	49	60 S	0	03	2	19	3	19	4	37	81		0	56	23

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 28.1 ^m			Mag: -4.8 PMG: 9 ^h 52 ^m			Mag: +0.7 PMG: 6 ^h 20 ^m			Mag: -2.1 PMG: 6 ^h 23 ^m			Mag: +0.5 PMG: 21 ^h 04 ^m						
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	52	07.6	211	40.4	-10	39.5	264	46.5	+15	08.5	264	00.4	+13	40.5	43	09.9	+0	58.8	
1	67	10.1	226	42.7		38.9	279	47.8		08.1	279	02.6		40.4	58	12.5		58.7	
2	82	12.6	241	45.0		38.3	294	49.1		07.8	294	04.9		40.3	73	15.1		58.7	
3	97	15.0	256	47.4		37.8	309	50.4		07.5	309	07.1		40.2	88	17.7		58.7	
4	112	17.5	271	49.7		37.2	324	51.8		07.1	324	09.3		40.2	103	20.2		58.6	
5	127	20.0	286	52.0	-10	36.6	339	53.1	+15	06.8	339	11.6	+13	40.1	118	22.8	+0	58.6	
6	142	22.4	301	54.3	-10	36.0	354	54.4	+15	06.5	354	13.8	+13	40.0	133	25.4	+0	58.5	
7	157	24.9	316	56.7		35.5	9	55.7		06.1	9	16.1		40.0	148	28.0		58.5	
8	172	27.4	331	59.0		34.9	24	57.1		05.8	24	18.3		39.9	163	30.5		58.5	
9	187	29.8	347	01.3		34.3	39	58.4		05.5	39	20.6		39.8	178	33.1		58.4	
10	202	32.3	2	03.6		33.7	54	59.7		05.2	54	22.8		39.8	193	35.7		58.4	
11	217	34.8	17	05.9	-10	33.2	70	01.1	+15	04.8	69	25.0	+13	39.7	208	38.3	+0	58.3	
12	232	37.2	32	08.2	-10	32.6	85	02.4	+15	04.5	84	27.3	+13	39.6	223	40.8	+0	58.3	
13	247	39.7	47	10.4		32.1	100	03.7		04.2	99	29.5		39.6	238	43.4		58.3	
14	262	42.1	62	12.7		31.5	115	05.0		03.8	114	31.8		39.5	253	46.0		58.2	
15	277	44.6	77	15.0		30.9	130	06.4		03.5	129	34.0		39.4	268	48.6		58.2	
16	292	47.1	92	17.3		30.4	145	07.7		03.2	144	36.3		39.4	283	51.1		58.2	
17	307	49.5	107	19.6	-10	29.8	160	09.0	+15	02.9	159	38.5	+13	39.3	298	53.7	+0	58.1	
18	322	52.0	122	21.8	-10	29.3	175	10.4	+15	02.5	174	40.7	+13	39.2	313	56.3	+0	58.1	
19	337	54.5	137	24.1		28.7	190	11.7		02.2	189	43.0		39.2	328	58.8		58.0	
20	352	56.9	152	26.4		28.2	205	13.0		01.9	204	45.2		39.1	344	01.4		58.0	
21	7	59.4	167	28.6		27.7	220	14.4		01.5	219	47.5		39.0	359	04.0		58.0	
22	23	01.9	182	30.9		27.1	235	15.7		01.2	234	49.7		39.0	14	06.6		57.9	
23	38	04.3	197	33.1		26.6	250	17.0		00.9	249	52.0		38.9	29	09.1		57.9	
24	53	06.8	212	35.4	-10	26.0	265	18.4	+15	00.6	264	54.2	+13	38.8	44	11.7	+0	57.9	
Dif	—		+23		+6		+13		-3		+22		-1		+26		0		

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG:11 ^h 44.4 ^m				Edad: 4.7 ^d SD: 14:7 PMG: 16 ^h 00 ^m								Civil		Náutico	Hora	R°	Hora	R°	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif														
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m	
0	183	54.7	-18	10.1	127	59.5	-26	04.4	50	60 N	15 33	16 22	17 13	13 28	9	18 39	92			
1	198	54.6		10.8	142	29.6 ¹¹¹	-25	59.4	52	58	44	29	17	13 06	14	19 01	85			
2	213	54.5		11.4	156	59.8 ¹¹²		54.2	53	56	15 54	36	21	12 48	19	19 80				
3	228	54.4		12.1	171	30.0 ¹¹²		48.9	54	54	16 03	42	25	32 23		34 77				
4	243	54.3		12.7	186	00.2 ¹¹²		43.5	55	52	10	48	29	19 25		47 74				
5	258	54.2	-18	13.4	200	30.5 ¹¹³	-25	38.0	54	50	16 17	16 53	17 32	12 07	28	19 58	72			
6	273	54.1	-18	14.0	215	00.9 ¹¹⁴	-25	32.4	56	45	16 32	17 04	17 39	11 43	32	20 22	67			
7	288	54.0		14.7	229	31.3 ¹¹⁴		26.6	58	40	45	14	46	23 35		40 64				
8	303	53.9		15.4	244	01.7 ¹¹⁴		20.8	58	35	16 55	22	52	11 07	37	20 56	61			
9	318	53.8		16.0	258	32.2 ¹¹⁵		14.8	60	30	17 04	30	17 59	10 53	39	21 10	58			
10	333	53.8		16.6	273	02.8 ¹¹⁶		08.7	61	20	20	44	18 10	28 44		33 54				
11	348	53.7	-18	17.3	287	33.4 ¹¹⁶	-25	02.5	62	10 N	17 35	17 57	18 22	10 07	47	21 53	51			
12	3	53.6	-18	17.9	302	04.1 ¹¹⁷	-24	56.2	63	0	17 48	18 10	18 35	9 48	49	22 11	48			
13	18	53.5		18.6	316	34.8 ¹¹⁷		49.7	65	10 S	18 01	24	18 50	28 52		29 45				
14	33	53.4		19.2	331	05.5 ¹¹⁷		43.2	67	20	16	40	19 07	9 07	55	22 49	41			
15	48	53.3		19.9	345	36.3 ¹¹⁸		36.5	65	30	33	18 59	30	8 42	59	23 11	38			
16	63	53.2		20.5	0	07.2 ¹¹⁹		29.7	68	35	43	19 11	19 45	28 60		25 35				
17	78	53.1	-18	21.2	14	38.1 ¹¹⁹	-24	22.8	69	40	18 54	19 24	20 02	8 11	63	23 40	32			
18	93	53.0	-18	21.8	29	09.1 ¹²⁰	-24	15.9	69	45	19 07	19 41	20 24	7 51	66	23 57	29			
19	108	52.9		22.5	43	40.1 ¹²⁰		08.8	71	50	24	20 03	20 54	26 70		** ** *				
20	123	52.8		23.1	58	11.2 ¹²¹	-24	01.5	73	52	32	13	21 10	7 13	73	0 02	30			
21	138	52.7		23.7	72	42.3 ¹²¹	-23	54.2	73	54	40	25	29	6 59	75	17 26				
22	153	52.6		24.4	87	13.5 ¹²²		46.8	75	56	19 50	39	21 54	43 78		34 23				
23	168	52.5		25.0	101	44.8 ¹²³		39.3	75	58	20 01	20 55	22 29	6 23	83	0 54	19			
24	183	52.4	-18	25.7	116	16.1 ¹²³	-23	31.6	77	60 S	20 14	21 16	** ** *	5 58	90	1 19	12			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 20 ^h 24.2 ^m		Mag: -4.8 PMG: 9 ^h 48 ^m			Mag: +0.7 PMG: 6 ^h 18 ^m			Mag: -2.1 PMG: 6 ^h 19 ^m			Mag: +0.5 PMG: 21 ^h 00 ^m								
	hG ♈	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec	hG ♄	Dec		hG ♅	Dec						
h	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	
0	53	06.8	212	35.4	-10	26.0	265	18.4	+15	00.6	264	54.2	+13	38.8	44	11.7	+0	57.9		
1	68	09.3	227	37.6		25.5	280	19.7	+15	00.2	279	56.5		38.8	59	14.3		57.8		
2	83	11.7	242	39.9		25.0	295	21.0	+14	59.9	294	58.7		38.7	74	16.9		57.8		
3	98	14.2	257	42.1		24.4	310	22.4		59.6	310	01.0		38.6	89	19.4		57.7		
4	113	16.6	272	44.4		23.9	325	23.7		59.2	325	03.2		38.6	104	22.0		57.7		
5	128	19.1	287	46.6	-10	23.4	340	25.1	+14	58.9	340	05.4	+13	38.5	119	24.6	+0	57.7		
6	143	21.6	302	48.8	-10	22.8	355	26.4	+14	58.6	355	07.7	+13	38.4	134	27.1	+0	57.6		
7	158	24.0	317	51.0		22.3	10	27.7		58.3	10	09.9		38.4	149	29.7		57.6		
8	173	26.5	332	53.2		21.8	25	29.1		57.9	25	12.2		38.3	164	32.3		57.6		
9	188	29.0	347	55.5		21.3	40	30.4		57.6	40	14.4		38.2	179	34.9		57.5		
10	203	31.4	2	57.7		20.8	55	31.7		57.3	55	16.7		38.2	194	37.4		57.5		
11	218	33.9	17	59.9	-10	20.2	70	33.1	+14	56.9	70	18.9	+13	38.1	209	40.0	+0	57.4		
12	233	36.4	33	02.1	-10	19.7	85	34.4	+14	56.6	85	21.2	+13	38.1	224	42.6	+0	57.4		
13	248	38.8	48	04.3		19.2	100	35.8		56.3	100	23.4		38.0	239	45.1		57.4		
14	263	41.3	63	06.5		18.7	115	37.1		56.0	115	25.7		37.9	254	47.7		57.3		
15	278	43.8	78	08.7		18.2	130	38.4		55.6	130	27.9		37.9	269	50.3		57.3		
16	293	46.2	93	10.9		17.7	145	39.8		55.3	145	30.2		37.8	284	52.9		57.3		
17	308	48.7	108	13.1	-10	17.2	160	41.1	+14	55.0	160	32.4	+13	37.7	299	55.4	+0	57.2		
18	323	51.1	123	15.2	-10	16.7	175	42.5	+14	54.7	175	34.7	+13	37.7	314	58.0	+0	57.2		
19	338	53.6	138	17.4		16.2	190	43.8		54.3	190	36.9		37.6	330	00.6		57.1		
20	353	56.1	153	19.6		15.7	205	45.2		54.0	205	39.2		37.5	345	03.1		57.1		
21	8	58.5	168	21.8		15.2	220	46.5		53.7	220	41.4		37.5	0	05.7		57.1		
22	24	01.0	183	23.9		14.7	235	47.9		53.4	235	43.7		37.4	15	08.3		57.0		
23	39	03.5	198	26.1		14.2	250	49.2		53.0	250	46.0		37.3	30	10.9		57.0		
24	54	05.9	213	28.2	-10	13.7	265	50.5	+14	52.7	265	48.2	+13	37.3	45	13.4	+0	57.0		
Dif	—		+22		+5		+13		-3		+22		-1		+26					

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 44.6 ^m				Edad: 5.7 ^d SD: 14'8 PMG: 16 ^h 46 ^m													
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico	Civil	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	183	52.4	-18	25.7	116	16.1	-23	31.6	60 N	6 17	7 09	7 58	13 35	3	20 09	89		
1	198	52.3		26.3	130	47.4		23.9	58	12	7 01	46	19	8	25	84		
2	213	52.1		27.0	145	18.8		16.0	56	08	6 54	36	13 05	12	38	80		
3	228	52.0		27.6	159	50.3	-23	08.1	54	05	48	28	12 53	15	49	77		
4	243	51.9		28.2	174	21.8	-23	00.0	52	6 01	42	20	43 17		20 59	74		
5	258	51.8	-18	28.9	188	53.4	-22	51.9	50	5 58	6 37	7 13	12 33	20	21 08	72		
6	273	51.7	-18	29.5	203	25.0	-22	43.6	45	5 50	6 26	6 58	12 13	25	21 27	67		
7	288	51.6		30.1	217	56.7		35.3	40	43	16	45	11 57	28	43	62		
8	303	51.5		30.8	232	28.4		26.8	35	37	07	34	43 31		21 55	60		
9	318	51.4		31.4	247	00.2		18.2	30	31	6 00	25	31 34		22 07	56		
10	333	51.3		32.0	261	32.0		09.6	20	19	5 46	6 09	11 10	39	26	52		
11	348	51.2	-18	32.7	276	03.9	-22	00.8	10 N	5 07	5 32	5 54	10 52	42	22 42	48		
12	3	51.1	-18	33.3	290	35.8	-21	52.0	0	4 54	5 19	5 41	10 35	46	22 57	45		
13	18	51.0		34.0	305	07.8		43.0	10 S	39	5 05	27	18 49		23 13	40		
14	33	50.9		34.6	319	39.9		34.0	20	4 21	4 49	5 13	10 00	53	29	37		
15	48	50.8		35.2	334	12.0		24.8	30	3 59	30	4 56	9 39	57	47	33		
16	63	50.7		35.8	348	44.1		15.6	35	44	18	46	27 59		23 58	30		
17	78	50.6	-18	36.5	3	16.3	-21	06.3	40	3 27	4 04	4 35	9 13	62	** ** *	**		
18	93	50.5	-18	37.1	17	48.6	-20	56.8	45	3 04	3 47	4 21	8 56	66	** ** *	**		
19	108	50.3		37.7	32	20.9		47.3	50	2 34	26	4 05	34 71		0 20	22		
20	123	50.2		38.4	46	53.2		37.7	52	2 18	15	3 57	24 74		30	21		
21	138	50.1		39.0	61	25.6		28.0	54	1 59	3 03	48	13 76		42	18		
22	153	50.0		39.6	75	58.1		18.2	56	1 35	2 49	39	8 00	80	0 55	15		
23	168	49.9		40.3	90	30.6	-20	08.3	58	0 59	33	27	7 45	84	1 11	11		
24	183	49.8	-18	40.9	105	03.1	-19	58.4	60 S	** ** *	2 13	3 14	7 27	89	1 30	5		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 20.3 ^m		Mag: -4.8 PMG: 9 ^h 45 ^m		Mag: +0.6 PMG: 6 ^h 16 ^m		Mag: -2.1 PMG: 6 ^h 16 ^m		Mag: +0.5 PMG: 20 ^h 56 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	54	05.9	213	28.2	-10	13.7	265	50.5	+14	52.7
1	69	08.4	228	30.4		13.2	280	51.9		52.4
2	84	10.9	243	32.6		12.7	295	53.2		52.0
3	99	13.3	258	34.7		12.3	310	54.6		51.7
4	114	15.8	273	36.8		11.8	325	55.9		51.4
5	129	18.3	288	39.0	-10	11.3	340	57.3	+14	51.1
6	144	20.7	303	41.1	-10	10.8	355	58.6	+14	50.7
7	159	23.2	318	43.3		10.3	11	00.0		50.4
8	174	25.6	333	45.4		09.9	26	01.3		50.1
9	189	28.1	348	47.5		09.4	41	02.7		49.8
10	204	30.6	3	49.6		08.9	56	04.0		49.4
11	219	33.0	18	51.8	-10	08.5	71	05.4	+14	49.1
12	234	35.5	33	53.9	-10	08.0	86	06.7	+14	48.8
13	249	38.0	48	56.0		07.5	101	08.1		48.5
14	264	40.4	63	58.1		07.1	116	09.4		48.1
15	279	42.9	79	00.2		06.6	131	10.8		47.8
16	294	45.4	94	02.3		06.2	146	12.2		47.5
17	309	47.8	109	04.4	-10	05.7	161	13.5	+14	47.2
18	324	50.3	124	06.5	-10	05.3	176	14.9	+14	46.8
19	339	52.7	139	08.6		04.8	191	16.2		46.5
20	354	55.2	154	10.7		04.3	206	17.6		46.2
21	9	57.7	169	12.8		03.9	221	18.9		45.9
22	25	00.1	184	14.8		03.5	236	20.3		45.5
23	40	02.6	199	16.9		03.0	251	21.6		45.2
24	55	05.1	214	19.0	-10	02.6	266	23.0	+14	44.9
Dif	—		+21		+5		+14		-3	

UT	SOL		LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 44.8 ^m		Edad: 6.7 ^d SD: 14/8 PMG: 17 ^h 31 ^m PHE { 4 ^h : 54/5 12 ^h : 54/6 20 ^h : 54/8 R°: 45 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil			Náutico	Hora	R°	Hora	R°	
h	° /	° /	° /		° /		°	h m	h m	h m	h m	h m	m	h m	m
0	183 49.8	-18 40.9	105 03.1		-19 58.4		60 N	15 28	16 18	17 10	13 38	3	21 38	89	
1	198 49.7		119 35.7	136	48.3	101	58	40	26	14	27	7	49	85	
2	213 49.6		134 08.4	137	38.2	101	56	50	33	19	17	10	21 58	81	
3	228 49.5		148 41.1	137	27.9	103	54	15 59	39	23	08	13	22 06	78	
4	243 49.3		163 13.8	137	17.6	103	52	16 07	45	26	13	00	13	76	
5	258 49.2	-18 44.0	177 46.6	138	-19 07.2	104	50	16 15	16 50	17 30	12 53	18	22 20	73	
6	273 49.1	-18 44.6	192 19.5	139	-18 56.7	105	45	16 30	17 02	17 38	12 38	22	22 34	68	
7	288 49.0		206 52.4	139	46.1	106	40	43	12	45	25	27	45	64	
8	303 48.9		221 25.3	139	35.5	106	35	16 54	21	51	14	30	22 55	61	
9	318 48.8		235 58.3	140	24.7	108	30	17 03	29	17 58	12 05	32	23 03	58	
10	333 48.7		250 31.3	140	13.9	108	20	20	43	18 10	11 49	37	18	52	
11	348 48.6	-18 47.7	265 04.3	140	-18 03.0	109	10 N	17 35	17 57	18 22	11 34	41	23 30	49	
12	3 48.4	-18 48.4	279 37.4	141	-17 52.0	110	0	17 48	18 10	18 36	11 21	45	23 42	44	
13	18 48.3		294 10.6	142	41.0	110	10 S	18 02	25	18 51	11 07	49	23 53	41	
14	33 48.2		308 43.8	142	29.8	112	20	17	18 41	19 09	10 53	53	** ** *		
15	48 48.1		323 17.0	142	18.6	112	30	35	19 01	32	36	58	** ** *		
16	63 48.0		337 50.3	143	-17 07.3	113	35	45	13	19 47	26	61	** ** *		
17	78 47.9	-18 51.5	352 23.6	143	-16 55.9	114	40	18 56	19 27	20 05	10 15	64	0 10	28	
18	93 47.7	-18 52.1	6 56.9	143	-16 44.4	115	45	19 10	19 44	20 28	10 02	68	0 25	24	
19	108 47.6		21 30.3	144	32.9	115	50	27	20 07	20 59	9 45	74	42	20	
20	123 47.5		36 03.7	144	21.3	116	52	35	17	21 16	38	75	0 51	17	
21	138 47.4		50 37.2	145	-16 09.6	117	54	44	30	21 36	29	79	1 00	14	
22	153 47.3		65 10.7	145	-15 57.9	117	56	19 54	20 44	22 02	20	81	10	11	
23	168 47.1		79 44.2	145	46.0	119	58	20 06	21 01	22 42	9 09	85	22	8	
24	183 47.0	-18 55.8	94 17.8	146	-15 34.1	119	60 S	20 19	21 23	** ** *	8 56	90	1 35	4	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 20 ^h 16.3 ^m		Mag: -4.8 PMG: 9 ^h 41 ^m		Mag: +0.6 PMG: 6 ^h 14 ^m		Mag: -2.1 PMG: 6 ^h 12 ^m		Mag: +0.5 PMG: 20 ^h 51 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	° /	° /	° /		° /		° /		° /						
0	55 05.1	214 19.0	-10 02.6		266 23.0	+14 44.9	266 42.4	+13 35.8	46 15.0	+0 56.1					
1	70 07.5	229 21.0	02.1		281 24.4	44.6	281 44.6	35.7	61 17.6	56.1					
2	85 10.0	244 23.1	01.7		296 25.7	44.2	296 46.9	35.7	76 20.2	56.1					
3	100 12.5	259 25.2	01.3		311 27.1	43.9	311 49.1	35.6	91 22.7	56.0					
4	115 14.9	274 27.2	00.8		326 28.4	43.6	326 51.4	35.5	106 25.3	56.0					
5	130 17.4	289 29.3	-10 00.4		341 29.8	+14 43.3	341 53.7	+13 35.5	121 27.9	+0 55.9					
6	145 19.9	304 31.3	-10 00.0		356 31.2	+14 43.0	356 55.9	+13 35.4	136 30.4	+0 55.9					
7	160 22.3	319 33.4	-9 59.5		11 32.5	42.6	11 58.2	35.3	151 33.0	55.9					
8	175 24.8	334 35.4	59.1		26 33.9	42.3	27 00.4	35.3	166 35.6	55.8					
9	190 27.2	349 37.5	58.7		41 35.2	42.0	42 02.7	35.2	181 38.1	55.8					
10	205 29.7	4 39.5	58.3		56 36.6	41.7	57 05.0	35.2	196 40.7	55.8					
11	220 32.2	19 41.5	-9 57.9		71 38.0	+14 41.3	72 07.2	+13 35.1	211 43.3	+0 55.7					
12	235 34.6	34 43.6	-9 57.4		86 39.3	+14 41.0	87 09.5	+13 35.0	226 45.8	+0 55.7					
13	250 37.1	49 45.6	57.0		101 40.7	40.7	102 11.8	35.0	241 48.4	55.7					
14	265 39.6	64 47.6	56.6		116 42.1	40.4	117 14.0	34.9	256 51.0	55.6					
15	280 42.0	79 49.6	56.2		131 43.4	40.0	132 16.3	34.9	271 53.5	55.6					
16	295 44.5	94 51.6	55.8		146 44.8	39.7	147 18.5	34.8	286 56.1	55.6					
17	310 47.0	109 53.7	-9 55.4		161 46.2	+14 39.4	162 20.8	+13 34.7	301 58.7	+0 55.5					
18	325 49.4	124 55.7	-9 55.0		176 47.5	+14 39.1	177 23.1	+13 34.7	317 01.2	+0 55.5					
19	340 51.9	139 57.7	54.6		191 48.9	38.8	192 25.3	34.6	332 03.8	55.5					
20	355 54.4	154 59.7	54.2		206 50.3	38.4	207 27.6	34.6	347 06.3	55.4					
21	10 56.8	170 01.7	53.8		221 51.6	38.1	222 29.9	34.5	2 08.9	55.4					
22	25 59.3	185 03.7	53.4		236 53.0	37.8	237 32.1	34.4	17 11.5	55.4					
23	41 01.7	200 05.7	53.0		251 54.4	37.5	252 34.4	34.4	32 14.0	55.3					
24	56 04.2	215 07.6	-9 52.6		266 55.7	+14 37.2	267 36.7	+13 34.3	47 16.6	+0 55.3					
Dif	—	+20	+4		+14	-3	+23	-1	+26	0					

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 11 ^h 45.0 ^m			Edad: 7.7 ^d SD: 14 ^h 9 PMG: 18 ^h 15 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	47.0	-18	55.8	94	17.8	-15	34.1	60 N	6	21	7	13	8	03	13	40
1	198	46.9		56.4	108	51.4		22.2	58	16	7	05	7	51	32	4	12
2	213	46.8		57.0	123	25.0	-15	10.1	56	12	6	58	41	26	7	18	80
3	228	46.7		57.6	137	58.6	-14	58.0	54	08	51	31	20	10	23	77	70
4	243	46.5		58.2	152	32.3		45.8	52	04	45	23	14	13	28	74	74
5	258	46.4	-18	58.8	167	06.1	-14	33.5	50	6	01	6	40	7	16	13	10
6	273	46.3	-18	59.4	181	39.8	-14	21.2	45	5	53	6	28	7	00	12	59
7	288	46.2	-19	00.0	196	13.6	-14	08.8	40	45	18	6	47	50	23	48	63
8	303	46.1	-19	00.6	210	47.4	-13	56.4	35	39	09	36	43	26	23	54	60
9	318	45.9		01.3	225	21.2		43.8	30	32	6	01	27	36	29	**	**
10	333	45.8		01.9	239	55.1		31.2	20	20	5	47	6	10	24	34	**
11	348	45.7	-19	02.5	254	29.0	-13	18.6	10 N	5	07	5	33	5	55	12	14
12	3	45.6	-19	03.1	269	02.9	-13	05.9	0	4	54	5	20	5	41	12	04
13	18	45.4		03.7	283	36.8	-12	53.1	10 S	39	5	05	27	11	55	47	**
14	33	45.3		04.3	298	10.8		40.2	20	4	21	4	49	5	12	44	52
15	48	45.2		04.9	312	44.7		27.3	30	3	57	29	4	55	32	57	20
16	63	45.1		05.5	327	18.7		14.3	35	42	17	45	25	60	28	27	30
17	78	44.9	-19	06.1	341	52.8	-12	01.3	40	3	24	4	02	4	33	11	18
18	93	44.8	-19	06.7	356	26.8	-11	48.2	45	3	01	3	45	4	19	11	08
19	108	44.7		07.3	11	00.8		35.0	50	2	30	23	4	02	10	57	72
20	123	44.6		07.9	25	34.9		21.8	52	2	14	3	12	3	54	52	74
21	138	44.4		08.5	40	09.0	-11	08.6	54	1	54	2	59	45	46	77	13
22	153	44.3		09.1	54	43.1	-10	55.2	56	1	27	45	35	40	80	20	8
23	168	44.2		09.7	69	17.2		41.8	58	0	47	28	23	32	84	28	5
24	183	44.1	-19	10.3	83	51.3	-10	28.4	60 S	**	**	2	06	3	10	10	24

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 12.4 ^m		Mag: -4.8 PMG: 9 ^h 38 ^m		Mag: +0.6 PMG: 6 ^h 12 ^m		Mag: -2.1 PMG: 6 ^h 09 ^m		Mag: +0.5 PMG: 20 ^h 47 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	56	04.2	215	07.6	-9	52.6	267	36.7	+13	34.3
1	71	06.7	230	09.6		52.2	282	38.9		34.3
2	86	09.1	245	11.6		51.8	297	41.2		34.2
3	101	11.6	260	13.6		51.4	312	43.5		34.1
4	116	14.1	275	15.6		51.0	327	45.7		34.1
5	131	16.5	290	17.5	-9	50.6	342	48.0	+13	34.0
6	146	19.0	305	19.5	-9	50.3	357	50.3	+13	34.0
7	161	21.5	320	21.4		49.9	12	52.5		33.9
8	176	23.9	335	23.4		49.5	27	54.8		33.9
9	191	26.4	350	25.4		49.1	42	57.1		33.8
10	206	28.8	5	27.3		48.8	57	59.3		33.7
11	221	31.3	20	29.3	-9	48.4	72	01.6	+13	33.7
12	236	33.8	35	31.2	-9	48.0	87	03.9	+13	33.6
13	251	36.2	50	33.2		47.7	102	06.2		33.6
14	266	38.7	65	35.1		47.3	117	08.4		33.5
15	281	41.2	80	37.0		46.9	132	10.7		33.4
16	296	43.6	95	39.0		46.6	147	13.0		33.4
17	311	46.1	110	40.9	-9	46.2	162	15.2	+13	33.3
18	326	48.6	125	42.8	-9	45.9	177	17.5	+13	33.3
19	341	51.0	140	44.7		45.5	192	19.8		33.2
20	356	53.5	155	46.6		45.1	207	22.1		33.2
21	11	56.0	170	48.6		44.8	222	24.3		33.1
22	26	58.4	185	50.5		44.4	237	26.6		33.0
23	42	00.9	200	52.4		44.1	252	28.9		33.0
24	57	03.3	215	54.3	-9	43.8	267	31.1	+13	32.9
Dif	—		+19		+4		+14		+23	-1

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16/2 PMG: 11 ^h 45.2 ^m				Edad: 8.7 ^d SD: 15/1 PMG: 18 ^h 57 ^m		PHE { 4 ^h : 55/6 12 ^h : 55/8 20 ^h : 56/1 Rº: 45 ^m														
	hG ☉	Dec			hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	183	44.1	-19	10.3	83	51.3	-10	28.4	135	60 N	15 24	16 14	17 07	13 40	2	**	**	**	**	**	**
1	198	43.9		10.9	98	25.5		14.9	135	58	37	23	12	36	5	**	**	**	**	**	**
2	213	43.8		11.5	112	59.6	-10	01.3	136	56	47	30	16	33	8	**	**	**	**	**	**
3	228	43.7		12.1	127	33.8	-9	47.7	136	54	15 57	37	20	30	10	**	**	**	**	**	**
4	243	43.5		12.7	142	07.9		34.1	136	52	16 05	43	24	27	12	**	**	**	**	**	**
5	258	43.4	-19	13.3	156	42.1	-9	20.3	138	50	16 12	16 48	17 28	13 24	15	**	**	**	**	**	**
6	273	43.3	-19	13.9	171	16.3	-9	06.6	137	45	16 28	17 00	17 36	13 18	20	**	**	**	**	**	**
7	288	43.2		14.5	185	50.5	-8	52.7	139	40	42	11	44	13	24	**	**	**	**	**	**
8	303	43.0		15.1	200	24.7		38.9	138	35	16 53	20	51	09	27	**	**	**	**	**	**
9	318	42.9		15.7	214	58.9		24.9	140	30	17 03	28	17 57	13 05	30	0	00	58			
10	333	42.8		16.3	229	33.1	-8	11.0	139	20	20	43	18 10	12 58	36	09	53				
11	348	42.6	-19	16.9	244	07.2	-7	57.0	140	10 N	17 35	17 57	18 22	12 53	39	0	17	48			
12	3	42.5	-19	17.4	258	41.4	-7	42.9	141	0	17 49	18 11	18 36	12 47	44	0	25	44			
13	18	42.4		18.0	273	15.6		28.8	141	0 S	18 03	25	18 52	42	48	32	40				
14	33	42.2		18.6	287	49.8		14.6	142	20	18	18 42	19 10	36	53	40	36				
15	48	42.1		19.2	302	24.0	-7	00.4	142	30	36	19 03	34	29	59	50	30				
16	63	42.0		19.8	316	58.2	-6	46.1	143	35	47	15	19 49	25	62	0	55	27			
17	78	41.8	-19	20.4	331	32.4	-6	31.9	142	40	18 59	19 30	20 08	12 21	65	1	01	23			
18	93	41.7	-19	21.0	346	06.5	-6	17.5	144	45	19 13	19 47	20 31	12 15	70	1	07	20			
19	108	41.6		21.6	0	40.7	-6	03.1	144	50	30	20 10	21 04	09	75	16	15				
20	123	41.4		22.2	15	14.8	-5	48.7	144	52	39	21	21	06	77	19	13				
21	138	41.3		22.7	29	49.0		34.2	145	54	48	34	21 42	03	80	23	11				
22	153	41.2		23.3	44	23.1		19.7	145	56	19 58	20 49	22 11	12	00	82	28	8			
23	168	41.0		23.9	58	57.2	-5	05.2	145	58	20 10	21 07	22 59	11	56	86	33	5			
24	183	40.9	-19	24.5	73	31.3	-4	50.6	146	60 S	20 24	21 30	** **	11 51	90	1	38	2			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 20 ^h 08.5 ^m		Mag: -4.9 PMG: 9 ^h 35 ^m			Mag: +0.6 PMG: 6 ^h 10 ^m			Mag: -2.1 PMG: 6 ^h 05 ^m			Mag: +0.5 PMG: 20 ^h 43 ^m									
h	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	57	03.3	215	54.3	-9	43.8	267	28.7	+14	29.5	268	31.1	+13	32.9	48	18.1	+0	54.5			
1	72	05.8	230	56.2		43.4	282	30.1		29.1	283	33.4		32.9	63	20.6		54.5			
2	87	08.3	245	58.1		43.1	297	31.5		28.8	298	35.7		32.8	78	23.2		54.5			
3	102	10.7	261	00.0		42.7	312	32.9		28.5	313	38.0		32.8	93	25.7		54.4			
4	117	13.2	276	01.9		42.4	327	34.3		28.2	328	40.2		32.7	108	28.3		54.4			
5	132	15.7	291	03.7	-9	42.1	342	35.7	+14	27.9	343	42.5	+13	32.7	123	30.8	+0	54.4			
6	147	18.1	306	05.6	-9	41.7	357	37.0	+14	27.6	358	44.8	+13	32.6	138	33.4	+0	54.4			
7	162	20.6	321	07.5		41.4	12	38.4		27.2	13	47.1		32.5	153	36.0		54.3			
8	177	23.1	336	09.4		41.1	27	39.8		26.9	28	49.3		32.5	168	38.5		54.3			
9	192	25.5	351	11.3		40.7	42	41.2		26.6	43	51.6		32.4	183	41.1		54.3			
10	207	28.0	6	13.1		40.4	57	42.6		26.3	58	53.9		32.4	198	43.6		54.2			
11	222	30.5	21	15.0	-9	40.1	72	44.0	+14	26.0	73	56.2	+13	32.3	213	46.2	+0	54.2			
12	237	32.9	36	16.9	-9	39.8	87	45.4	+14	25.6	88	58.4	+13	32.3	228	48.8	+0	54.2			
13	252	35.4	51	18.7		39.4	102	46.7		25.3	104	00.7		32.2	243	51.3		54.1			
14	267	37.8	66	20.6		39.1	117	48.1		25.0	119	03.0		32.1	258	53.9		54.1			
15	282	40.3	81	22.4		38.8	132	49.5		24.7	134	05.3		32.1	273	56.4		54.1			
16	297	42.8	96	24.3		38.5	147	50.9		24.4	149	07.6		32.0	288	59.0		54.1			
17	312	45.2	111	26.1	-9	38.2	162	52.3	+14	24.1	164	09.8	+13	32.0	304	01.5	+0	54.0			
18	327	47.7	126	28.0	-9	37.9	177	53.7	+14	23.7	179	12.1	+13	31.9	319	04.1	+0	54.0			
19	342	50.2	141	29.8		37.6	192	55.1		23.4	194	14.4		31.9	334	06.6		54.0			
20	357	52.6	156	31.6		37.3	207	56.5		23.1	209	16.7		31.8	349	09.2		53.9			
21	12	55.1	171	33.5		37.0	222	57.9		22.8	224	18.9		31.8	4	11.8		53.9			
22	27	57.6	186	35.3		36.7	237	59.3		22.5	239	21.2		31.7	19	14.3		53.9			
23	43	00.0	201	37.1		36.4	253	00.7		22.2	254	23.5		31.7	34	16.9		53.8			
24	58	02.5	216	38.9	-9	36.1	268	02.0	+14	21.8	269	25.8	+13	31.6	49	19.4	+0	53.8			
Dif	—		+19		+3		+14		-3		+23		-1		+26		0				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16/2 PMG: 11 ^h 45.4 ^m			Edad: 9.7 ^d SD: 15/3 PMG: 19 ^h 40 ^m PHE 4^h: 56/4 12^h: 56/7 20^h: 57/0 R°: 45^m																		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil	Hora	R°	Hora	R°							
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m						
0	183	40.9	-19	24.5	73	31.3	-4	50.6	60 N	6	25	7	17	8	08	13	41	0	0	33	89	
1	198	40.7		25.1	88	05.4		36.0	58	20		09	7	55		40	4			36	85	
2	213	40.6		25.7	102	39.5		21.3	56	15	7	01		45		39	7			38	82	
3	228	40.5		26.3	117	13.5		06.6	54	11	6	55		35		39	9			40	80	
4	243	40.3		26.8	131	47.5		51.9	52	07		49		27		38	12			42	77	
5	258	40.2	-19	27.4	146	21.6		37.1	50	6	03	6	43	7	19	13	37	14		0	44	74
6	273	40.1	-19	28.0	160	55.5		22.3	45	5	55	6	31	7	03	13	36	19		0	48	69
7	288	39.9		28.6	175	29.5		07.5	40	47		20		6	50		35	23			51	65
8	303	39.8		29.2	190	03.5		52.6	35	40		11		38		34	26			54	61	
9	318	39.6		29.7	204	37.4		37.7	30	34	6	03		28		33	30		0	56	58	
10	333	39.5		30.3	219	11.3		22.8	20	21	5	48		6	11		32	35		1	00	53
11	348	39.4	-19	30.9	233	45.1		07.8	10 N	5	08	5	34	5	56	13	31	40		1	04	48
12	3	39.2	-19	31.5	248	19.0		52.9	0	4	54	5	20	5	42	13	30	44		1	07	44
13	18	39.1		32.0	262	52.8		37.8	10 S	39		05		27		29	49			11	38	
14	33	38.9		32.6	277	26.5		22.8	20	4	20	4	48	5	12		28	53			14	34
15	48	38.8		33.2	292	00.3		07.7	30	3	56		28	4	54		26	60			18	29
16	63	38.7		33.8	306	34.0		52.6	35	41		15		44		26	62			20	26	
17	78	38.5	-19	34.3	321	07.6		37.5	40	3	22	4	01	4	32	13	25	66		1	23	22
18	93	38.4	-19	34.9	335	41.3		22.4	45	2	59	3	43	4	17	13	24	70		1	26	18
19	108	38.2		35.5	350	14.9		07.2	50		26		20	4	00		23	75			29	14
20	123	38.1		36.1	4	48.4		08.0	52	2	09	3	09	3	51		22	78			31	11
21	138	37.9		36.6	19	21.9		23.2	54	1	48	2	56	4	2		21	81			32	9
22	153	37.8		37.2	33	55.4		38.4	56	1	19		41	3	2		21	84			34	7
23	168	37.7		37.8	48	28.8		53.6	58	0	31		23	2	0		20	87			36	4
24	183	37.5	-19	38.3	63	02.2		08.9	60 S	**	**	2	00	3	06	13	19	91		1	39	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: -4.9 20 ^h 04.5 ^m		Mag: -4.9 PMG: 9 ^h 32 ^m		Mag: +0.6 PMG: 6 ^h 07 ^m		Mag: -2.1 PMG: 6 ^h 01 ^m		Mag: +0.6 PMG: 20 ^h 39 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	58	02.5	216	38.9	-9	36.1	268	02.0	+14	21.8	269	25.8	+13	31.6	49	19.4	+0	53.8	
1	73	04.9	231	40.8		35.8	283	03.4		21.5	284	28.1		31.5	64	22.0		53.8	
2	88	07.4	246	42.6		35.5	298	04.8		21.2	299	30.3		31.5	79	24.5		53.8	
3	103	09.9	261	44.4		35.2	313	06.2		20.9	314	32.6		31.4	94	27.1		53.7	
4	118	12.3	276	46.2		34.9	328	07.6		20.6	329	34.9		31.4	109	29.6		53.7	
5	133	14.8	291	48.0	-9	34.6	343	09.0	+14	20.3	344	37.2	+13	31.3	124	32.2	+0	53.7	
6	148	17.3	306	49.8	-9	34.3	358	10.4	+14	20.0	359	39.5	+13	31.3	139	34.8	+0	53.6	
7	163	19.7	321	51.6		34.0	13	11.8		19.6	14	41.8		31.2	154	37.3		53.6	
8	178	22.2	336	53.4		33.7	28	13.2		19.3	29	44.0		31.2	169	39.9		53.6	
9	193	24.7	351	55.2		33.5	43	14.6		19.0	44	46.3		31.1	184	42.4		53.5	
10	208	27.1	6	57.0		33.2	58	16.0		18.7	59	48.6		31.1	199	45.0		53.5	
11	223	29.6	21	58.8	-9	32.9	73	17.4	+14	18.4	74	50.9	+13	31.0	214	47.5	+0	53.5	
12	238	32.1	37	00.5	-9	32.6	88	18.8	+14	18.1	89	53.2	+13	31.0	229	50.1	+0	53.5	
13	253	34.5	52	02.3		32.4	103	20.2		17.7	104	55.4		30.9	244	52.6		53.4	
14	268	37.0	67	04.1		32.1	118	21.6		17.4	119	57.7		30.8	259	55.2		53.4	
15	283	39.4	82	05.9		31.8	133	23.0		17.1	135	00.0		30.8	274	57.7		53.4	
16	298	41.9	97	07.6		31.6	148	24.4		16.8	150	02.3		30.7	290	00.3		53.3	
17	313	44.4	112	09.4	-9	31.3	163	25.8	+14	16.5	165	04.6	+13	30.7	305	02.8	+0	53.3	
18	328	46.8	127	11.2	-9	31.0	178	27.2	+14	16.2	180	06.9	+13	30.6	320	05.4	+0	53.3	
19	343	49.3	142	12.9		30.8	193	28.6		15.9	195	09.2		30.6	335	08.0		53.3	
20	358	51.8	157	14.7		30.5	208	30.0		15.5	210	11.4		30.5	350	10.5		53.2	
21	13	54.2	172	16.4		30.2	223	31.4		15.2	225	13.7		30.5	5	13.1		53.2	
22	28	56.7	187	18.2		30.0	238	32.8		14.9	240	16.0		30.4	20	15.6		53.2	
23	43	59.2	202	19.9		29.7	253	34.2		14.6	255	18.3		30.4	35	18.2		53.2	
24	59	01.6	217	21.7	-9	29.5	268	35.6	+14	14.3	270	20.6	+13	30.3	50	20.7	+0	53.1	
Dif	—		+18		+3		+14		-3		+23		-1		+26		0		

UT	SOL		LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 45.6 ^m		Edad: 10.7 ^d SD: 15/6 PMG: 20 ^h 25 ^m						Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	37.5	-19	38.3	63	02.2	+1 08.9	60 N	15 20	16 11	17 04	13 41	3	2 02	94
1	198	37.4		38.9	77	35.5 ¹⁴³	24.2 ¹⁵³	58	33	20	09	44	6	01	91
2	213	37.2		39.5	92	08.8 ¹⁴³	39.4 ¹⁵²	56	44	27	14	46	9	00	88
3	228	37.1		40.1	106	42.1 ¹⁴³	+1 54.8 ¹⁵⁴	54	15 54	34	18	48	12	2 00	88
4	243	36.9		40.6	121	15.3 ¹⁴²	+2 10.1 ¹⁵³	52	16 02	41	22	50	14	1 59	82
5	258	36.8	-19	41.2	135	48.4 ¹⁴¹	+2 25.4 ¹⁵³	50	16 10	16 46	17 26	13 51	17	1 58	79
6	273	36.6	-19	41.8	150	21.5 ¹⁴¹	+2 40.7 ¹⁵³	45	16 27	16 59	17 35	13 55	22	1 57	74
7	288	36.5		42.3	164	54.5 ¹⁴⁰	+2 56.1 ¹⁵⁴	40	40	17 10	43	13 58	26	56	69
8	303	36.3		42.9	179	27.5 ¹⁴⁰	+3 11.5 ¹⁵⁴	35	16 52	19	50	14 00	30	55	66
9	318	36.2		43.4	194	00.4 ¹³⁹	26.8 ¹⁵³	30	17 02	27	17 57	03 33		54	63
10	333	36.0		44.0	208	33.3 ¹³⁹	42.2 ¹⁵⁴	20	19	43	18 10	07 39		53	56
11	348	35.9	-19	44.6	223	06.1 ¹³⁸	+3 57.6 ¹⁵⁴	10 N	17 35	17 57	18 23	14 11	43	1 52	51
12	3	35.7	-19	45.1	237	38.8 ¹³⁷	+4 13.0 ¹⁵⁴	0	17 49	18 11	18 37	14 14	48	1 51	46
13	18	35.6		45.7	252	11.5 ¹³⁷	28.3 ¹⁵³	10 S	18 04	26	18 53	18 53		49	43
14	33	35.4		46.3	266	44.1 ¹³⁶	43.7 ¹⁵⁴	20	20	18 43	19 12	21 58		48	37
15	48	35.3		46.8	281	16.6 ¹³⁵	+4 59.1 ¹⁵⁴	30	38	19 04	36	26 64		47	31
16	63	35.1		47.4	295	49.1 ¹³⁵	+5 14.5 ¹⁵⁴	35	18 49	17	19 52	28 68		46	28
17	78	35.0	-19	47.9	310	21.5 ¹³⁴	+5 29.9 ¹⁵⁴	40	19 01	19 32	20 11	14 31	71	1 45	25
18	93	34.8	-19	48.5	324	53.9 ¹³⁴	+5 45.3 ¹⁵⁴	45	19 16	19 50	20 35	14 34	76	1 44	20
19	108	34.7		49.1	339	26.1 ¹³²	+6 00.6 ¹⁵³	50	34	20 14	21 08	38 82		43	15
20	123	34.5		49.6	353	58.3 ¹³²	16.0 ¹⁵⁴	52	42	25	26	40 84		42	13
21	138	34.4		50.2	8	30.5 ¹³²	31.4 ¹⁵⁴	54	19 52	39	21 49	42 87		41	11
22	153	34.2		50.7	23	02.5 ¹³⁰	+6 46.7 ¹⁵³	56	20 03	20 54	22 20	45 90		41	8
23	168	34.1		51.3	37	34.5 ¹³⁰	+7 02.1 ¹⁵⁴	58	15	21 13	23 23	47 94		40	5
24	183	33.9	-19	51.8	52	06.4 ¹²⁹	+7 17.4 ¹⁵³	60 S	20 30	21 37	** **	14 50	98	1 39	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 00.6 ^m		Mag: -4.9 PMG: 9 ^h 29 ^m		Mag: +0.6 PMG: 6 ^h 05 ^m		Mag: -2.1 PMG: 5 ^h 58 ^m		Mag: +0.6 PMG: 20 ^h 35 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	59	01.6	217	21.7	-9	29.5	270	20.6	+13	30.3
1	74	04.1	232	23.4		29.2	285	22.9		30.3
2	89	06.6	247	25.2		29.0	300	25.2		30.2
3	104	09.0	262	26.9		28.7	315	27.5		30.2
4	119	11.5	277	28.6		28.5	330	29.7		30.1
5	134	13.9	292	30.4	-9	28.3	345	32.0	+13	30.1
6	149	16.4	307	32.1	-9	28.0	0	34.3	+13	30.0
7	164	18.9	322	33.8		27.8	15	36.6		30.0
8	179	21.3	337	35.5		27.5	30	38.9		29.9
9	194	23.8	352	37.2		27.3	45	41.2		29.9
10	209	26.3	7	38.9		27.1	60	43.5		29.8
11	224	28.7	22	40.6	-9	26.8	75	45.8	+13	29.8
12	239	31.2	37	42.4	-9	26.6	90	48.1	+13	29.7
13	254	33.7	52	44.1		26.4	105	50.3		29.7
14	269	36.1	67	45.8		26.2	120	52.6		29.6
15	284	38.6	82	47.4		25.9	135	54.9		29.6
16	299	41.0	97	49.1		25.7	150	57.2		29.5
17	314	43.5	112	50.8	-9	25.5	165	59.5	+13	29.5
18	329	46.0	127	52.5	-9	25.3	181	01.8	+13	29.4
19	344	48.4	142	54.2		25.1	196	04.1		29.4
20	359	50.9	157	55.9		24.9	211	06.4		29.3
21	14	53.4	172	57.5		24.6	226	08.7		29.3
22	29	55.8	187	59.2		24.4	241	11.0		29.2
23	44	58.3	203	00.9		24.2	256	13.3		29.2
24	60	00.8	218	02.6	-9	24.0	271	15.6	+13	29.1
Dif	—		+17	+2		+14	-3	+23	-1	+25

UT	SOL		LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 45.9 ^m		Edad: 11.7 ^d SD: 15'8 PMG: 21 ^h 13 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	33.9	-19	51.8	52	06.4	+7	17.4	60 N	6	29	7	22	8	13
1	198	33.8		52.4	66	38.2		32.7	58	23	13	8	00	48	7
2	213	33.6		52.9	81	09.9	+7	48.1	56	18	7	05	7	48	54
3	228	33.5		53.5	95	41.6	+8	03.4	54	14	6	58	39	13	58
4	243	33.3		54.1	110	13.2		18.6	52	10	52	30	14	03	16
5	258	33.2	-19	54.6	124	44.7	+8	33.9	50	6	06	6	46	7	22
6	273	33.0	-19	55.2	139	16.1	+8	49.1	45	5	57	6	33	7	05
7	288	32.9		55.7	153	47.4	+9	04.3	40	49	22	6	52	23	28
8	303	32.7		56.3	168	18.6		19.5	35	42	13	40	29	33	2
9	318	32.5		56.8	182	49.7		34.7	30	35	6	04	30	34	36
10	333	32.4		57.4	197	20.8	+9	49.9	20	22	5	49	6	12	44
11	348	32.2	-19	57.9	211	51.7	+10	05.0	10 N	5	09	5	35	5	57
12	3	32.1	-19	58.4	226	22.6	+10	20.1	0	4	55	5	20	5	42
13	18	31.9		59.0	240	53.3		35.1	10 S	39	5	05	28	09	56
14	33	31.8	-19	59.5	255	24.0	+10	50.2	20	4	20	4	48	5	12
15	48	31.6	-20	00.1	269	54.6	+11	05.1	30	3	55	27	4	53	28
16	63	31.4		00.6	284	25.0		20.1	35	40	4	14	43	34	70
17	78	31.3	-20	01.2	298	55.4	+11	35.0	40	3	20	3	59	4	30
18	93	31.1	-20	01.7	313	25.7	+11	49.9	45	2	56	3	41	4	15
19	108	31.0		02.3	327	55.8	+12	04.8	50	23	17	3	57	15	58
20	123	30.8		02.8	342	25.9		19.6	52	2	05	3	05	49	16
21	138	30.6		03.3	356	55.8		34.3	54	1	42	2	52	39	08
22	153	30.5		03.9	11	25.7	+12	49.0	56	1	11	36	28	13	95
23	168	30.3		04.4	25	55.4	+13	03.7	58	0	08	2	18	16	20
24	183	30.2	-20	05.0	40	25.0	+13	18.3	60 S	**	**	1	53	3	01

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 19 ^h 56.7 ^m		Mag: -4.9 PMG: 9 ^h 27 ^m		Mag: +0.6 PMG: 6 ^h 03 ^m		Mag: -2.1 PMG: 5 ^h 54 ^m		Mag: +0.6 PMG: 20 ^h 31 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	60	00.8	218	02.6	-9	24.0	271	15.6	+13	29.1
1	75	03.2	233	04.2		23.8	286	17.9		29.1
2	90	05.7	248	05.9		23.6	301	20.2		29.0
3	105	08.2	263	07.5		23.4	316	22.4		29.0
4	120	10.6	278	09.2		23.2	331	24.7		28.9
5	135	13.1	293	10.8	-9	23.0	346	27.0	+13	28.9
6	150	15.5	308	12.5	-9	22.8	1	29.3	+13	28.8
7	165	18.0	323	14.1		22.6	16	31.6		28.8
8	180	20.5	338	15.8		22.4	31	33.9		28.7
9	195	22.9	353	17.4		22.3	46	36.2		28.7
10	210	25.4	8	19.1		22.1	61	38.5		28.6
11	225	27.9	23	20.7	-9	21.9	76	40.8	+13	28.6
12	240	30.3	38	22.3	-9	21.7	91	43.1	+13	28.5
13	255	32.8	53	23.9		21.5	106	45.4		28.5
14	270	35.3	68	25.6		21.3	121	47.7		28.4
15	285	37.7	83	27.2		21.2	136	50.0		28.4
16	300	40.2	98	28.8		21.0	151	52.3		28.3
17	315	42.6	113	30.4	-9	20.8	166	54.6	+13	28.3
18	330	45.1	128	32.0	-9	20.6	181	56.9	+13	28.2
19	345	47.6	143	33.6		20.5	196	59.2		28.2
20	0	50.0	158	35.2		20.3	212	01.5		28.1
21	15	52.5	173	36.8		20.1	227	03.8		28.1
22	30	55.0	188	38.4		20.0	242	06.1		28.0
23	45	57.4	203	40.0		19.8	257	08.4		28.0
24	60	59.9	218	41.6	-9	19.6	272	10.7	+13	27.9
Dif	—		+16		+2		+14		-3	
								+23		0
										+25

UT	SOL			☾ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 46.1 ^m			Edad: 12.7 ^d SD: 16/1 PMG: 22 ^h 05 ^m PHE { 4 ^h : 59/1 12 ^h : 59/4 20 ^h : 59/7 Rº: 59 ^m													
	hG ☉	Dec		hG ☾	Dif		Dec	Dif				Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m
0	183	30.2	-20	05.0	40	25.0	+13	18.3	146	60 N	15 17	16 08	17 01	13 44	7	5 15	109
1	198	30.0		05.5	54	54.5		32.9	146	58	30	17	07	13 55	12	5 05	104
2	213	29.8		06.0	69	23.9	+13	47.4	145	56	41	25	12	14 04	17	4 57	99
3	228	29.7		06.6	83	53.2	+14	01.8	144	54	15 51	32	16	12 20		50	95
4	243	29.5		07.1	98	22.4		16.2	144	52	16 00	39	20	19 24		44	91
5	258	29.4	-20	07.7	112	51.5	+14	30.6	144	50	16 08	16 44	17 24	14 26	26	4 38	89
6	273	29.2	-20	08.2	127	20.4	+14	44.8	142	45	16 25	16 57	17 33	14 40	32	4 26	82
7	288	29.0		08.7	141	49.2	+14	59.0	142	40	39	17 08	42	14 51	37	16	77
8	303	28.9		09.3	156	17.9	+15	13.2	142	35	16 51	18	49	15 02	40	07	74
9	318	28.7		09.8	170	46.5		27.3	141	30	17 01	27	17 56	10 44		4 00	70
10	333	28.5		10.3	185	15.0		41.3	140	20	19	43	18 10	26 49		3 47	64
11	348	28.4	-20	10.9	199	43.3	+15	55.2	139	10 N	17 35	17 57	18 23	15 39	54	3 35	60
12	3	28.2	-20	11.4	214	11.6	+16	09.1	139	0	17 50	18 12	18 37	15 52	58	3 25	55
13	18	28.0		11.9	228	39.7		22.9	138	10 S	18 05	27	18 54	16 05	62	14	51
14	33	27.9		12.5	243	07.7		36.6	137	20	21	18 45	19 13	19 67		3 03	46
15	48	27.7		13.0	257	35.5	+16	50.3	137	30	40	19 06	38	35 72		2 50	40
16	63	27.5		13.5	272	03.2	+17	03.8	135	35	18 51	19	19 54	44 76		43	37
17	78	27.4	-20	14.0	286	30.8	+17	17.3	135	40	19 03	19 34	20 13	16 55	80	2 35	33
18	93	27.2	-20	14.6	300	58.3	+17	30.7	134	45	19 18	19 53	20 38	17 08	84	2 25	29
19	108	27.0		15.1	315	25.7		44.0	133	50	37	20 18	21 13	23 91		14	22
20	123	26.9		15.6	329	52.9	+17	57.2	132	52	46	29	32	31 93		08	20
21	138	26.7		16.2	344	20.0	+18	10.4	132	54	19 55	43	21 56	39 97		2 02	17
22	153	26.5		16.7	358	46.9		23.4	130	56	20 07	20 59	22 29	48 102		1 56	13
23	168	26.4		17.2	13	13.7		36.3	129	58	20	21 19	** **	17 59	107	49	9
24	183	26.2	-20	17.7	27	40.4	+18	49.2	129	60 S	20 35	21 45	** **	18 11	114	1 40	5

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 19 ^h 52.7 ^m		Mag: -4.9 PMG: 9 ^h 24 ^m		Mag: +0.6 PMG: 6 ^h 01 ^m		Mag: -2.1 PMG: 5 ^h 50 ^m		Mag: +0.6 PMG: 20 ^h 27 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	60	59.9	218	41.6	-9	19.6	269	43.7	+13	59.4	272	10.7	+13	27.9	52	23.0	+0	51.9
1	76	02.4	233	43.2		19.5	284	45.1		59.1	287	13.0		27.9	67	25.6		51.8
2	91	04.8	248	44.8		19.3	299	46.6		58.8	302	15.3		27.9	82	28.1		51.8
3	106	07.3	263	46.4		19.2	314	48.0		58.5	317	17.6		27.8	97	30.7		51.8
4	121	09.8	278	48.0		19.0	329	49.4		58.2	332	19.9		27.8	112	33.2		51.8
5	136	12.2	293	49.5	-9	18.9	344	50.9	+13	57.9	347	22.2	+13	27.7	127	35.7	+0	51.7
6	151	14.7	308	51.1	-9	18.7	359	52.3	+13	57.6	2	24.5	+13	27.7	142	38.3	+0	51.7
7	166	17.1	323	52.7		18.6	14	53.7		57.3	17	26.8		27.6	157	40.8		51.7
8	181	19.6	338	54.2		18.4	29	55.2		56.9	32	29.1		27.6	172	43.4		51.7
9	196	22.1	353	55.8		18.3	44	56.6		56.6	47	31.4		27.5	187	45.9		51.6
10	211	24.5	8	57.4		18.1	59	58.0		56.3	62	33.7		27.5	202	48.5		51.6
11	226	27.0	23	58.9	-9	18.0	74	59.5	+13	56.0	77	36.0	+13	27.4	217	51.0	+0	51.6
12	241	29.5	39	00.5	-9	17.9	90	00.9	+13	55.7	92	38.3	+13	27.4	232	53.5	+0	51.6
13	256	31.9	54	02.0		17.7	105	02.3		55.4	107	40.6		27.3	247	56.1		51.6
14	271	34.4	69	03.6		17.6	120	03.8		55.1	122	42.9		27.3	262	58.6		51.5
15	286	36.9	84	05.1		17.5	135	05.2		54.8	137	45.3		27.3	278	01.2		51.5
16	301	39.3	99	06.7		17.3	150	06.6		54.5	152	47.6		27.2	293	03.7		51.5
17	316	41.8	114	08.2	-9	17.2	165	08.1	+13	54.2	167	49.9	+13	27.2	308	06.3	+0	51.5
18	331	44.3	129	09.8	-9	17.1	180	09.5	+13	53.9	182	52.2	+13	27.1	323	08.8	+0	51.4
19	346	46.7	144	11.3		16.9	195	11.0		53.6	197	54.5		27.1	338	11.3		51.4
20	1	49.2	159	12.8		16.8	210	12.4		53.3	212	56.8		27.0	353	13.9		51.4
21	16	51.6	174	14.4		16.7	225	13.9		53.0	227	59.1		27.0	8	16.4		51.4
22	31	54.1	189	15.9		16.6	240	15.3		52.7	243	01.4		26.9	23	19.0		51.3
23	46	56.6	204	17.4		16.4	255	16.7		52.4	258	03.7		26.9	38	21.5		51.3
24	61	59.0	219	18.9	-9	16.3	270	18.2	+13	52.1	273	06.0	+13	26.8	53	24.0	+0	51.3
Dif	—		+16		+1		+14		-3		+23		0		+25		0	

UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG:11 ^h 46.4 ^m			Edad: 13.7 ^d PHE { 4 ^h : 60'0 12 ^h : 60'2 20 ^h : 60'4 Rº: 63 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil			Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	h	m
0	183	26.2	-20	17.7	27	40.4	76	+18	49.2	127	6	32	7	26	8	17	13	50
1	198	26.0		18.3	42	07.0	74	+19	01.9	127	27		17	8	04	14	06	19
2	213	25.9		18.8	56	33.4	74		14.6	125	22	08	7	52	19	25		35
3	228	25.7		19.3	70	59.8	71		27.1	124	17	7	01	42	31	29	24	95
4	243	25.5		19.8	85	25.9	71		39.5	124	13	6	55	33	41	33	14	92
5	258	25.3	-20	20.3	99	52.0	71	+19	51.8	123	6	09	6	49	7	25	14	51
6	273	25.2	-20	20.9	114	17.9	69	+20	04.1	123	5	59	6	36	7	08	15	11
7	288	25.0		21.4	128	43.6	67		16.1	120	51	24	6	54	27	45	32	79
8	303	24.8		21.9	143	09.3	67		28.1	120	44	15	42	41	48		19	75
9	318	24.7		22.4	157	34.8	65		40.0	119	37	6	06	32	15	53	50	5
10	333	24.5		22.9	172	00.2	64	+20	51.7	117	23	5	50	6	14	16	13	56
11	348	24.3	-20	23.5	186	25.4	62	+21	03.3	116	5	10	5	35	5	58	16	32
12	3	24.1	-20	24.0	200	50.5	61	+21	14.8	115	4	55	5	21	5	43	16	49
13	18	24.0		24.5	215	15.5	60		26.2	114	39	5	05	28	17	06	65	4
14	33	23.8		25.0	229	40.3	58		37.4	112	4	19	4	48	5	11	24	69
15	48	23.6		25.5	244	05.0	57		48.5	111	3	54	26	4	53	46	73	29
16	63	23.4		26.0	258	29.6	56	+21	59.5	110	38	4	13	42	17	59	75	18
17	78	23.3	-20	26.5	272	54.0	54	+22	10.3	108	3	19	3	58	4	29	18	13
18	93	23.1	-20	27.1	287	18.4	54	+22	21.0	107	2	54	3	39	4	14	18	31
19	108	22.9		27.6	301	42.5	51		31.6	106	19	15	3	55	18	52	89	35
20	123	22.7		28.1	316	06.6	51		42.0	104	2	00	3	03	46	19	03	91
21	138	22.6		28.6	330	30.5	49	+22	52.3	103	1	36	2	49	37	15	94	18
22	153	22.4		29.1	344	54.3	48	+23	02.4	101	1	03	33	25	28	99	2	08
23	168	22.2		29.6	359	18.0	47		12.4	100	**	**	2	13	3	12	19	44
24	183	22.0	-20	30.1	13	41.5	45	+23	22.2	98	**	**	1	47	2	57	20	04
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 48.8 ^m		Mag: -4.9 PMG: 9 ^h 22 ^m			Mag: +0.6 PMG: 5 ^h 58 ^m			Mag: -2.1 PMG: 5 ^h 47 ^m			Mag: +0.6 PMG: 20 ^h 23 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	61	59.0	219	18.9	-9	16.3	270	18.2	+13	52.1	273	06.0	+13	26.8				
1	77	01.5	234	20.4		16.2	285	19.6		51.8	288	08.3		26.8				
2	92	04.0	249	22.0		16.1	300	21.1		51.5	303	10.6		26.8				
3	107	06.4	264	23.5		16.0	315	22.5		51.2	318	12.9		26.7				
4	122	08.9	279	25.0		15.9	330	24.0		50.9	333	15.2		26.7				
5	137	11.4	294	26.5	-9	15.8	345	25.4	+13	50.5	348	17.6	+13	26.6				
6	152	13.8	309	28.0	-9	15.7	0	26.8	+13	50.2	3	19.9	+13	26.6				
7	167	16.3	324	29.5		15.6	15	28.3		49.9	18	22.2		26.5				
8	182	18.8	339	31.0		15.5	30	29.7		49.6	33	24.5		26.5				
9	197	21.2	354	32.5		15.4	45	31.2		49.3	48	26.8		26.5				
10	212	23.7	9	34.0		15.3	60	32.6		49.0	63	29.1		26.4				
11	227	26.1	24	35.4	-9	15.2	75	34.1	+13	48.7	78	31.4	+13	26.4				
12	242	28.6	39	36.9	-9	15.1	90	35.5	+13	48.4	93	33.7	+13	26.3				
13	257	31.1	54	38.4		15.0	105	37.0		48.1	108	36.0		26.3				
14	272	33.5	69	39.9		14.9	120	38.4		47.8	123	38.4		26.2				
15	287	36.0	84	41.4		14.8	135	39.9		47.5	138	40.7		26.2				
16	302	38.5	99	42.8		14.7	150	41.3		47.2	153	43.0		26.1				
17	317	40.9	114	44.3	-9	14.6	165	42.8	+13	46.9	168	45.3	+13	26.1				
18	332	43.4	129	45.8	-9	14.5	180	44.2	+13	46.6	183	47.6	+13	26.1				
19	347	45.9	144	47.2		14.4	195	45.7		46.3	198	49.9		26.0				
20	2	48.3	159	48.7		14.4	210	47.1		46.0	213	52.2		26.0				
21	17	50.8	174	50.2		14.3	225	48.6		45.7	228	54.5		25.9				
22	32	53.2	189	51.6		14.2	240	50.0		45.4	243	56.9		25.9				
23	47	55.7	204	53.1		14.1	255	51.5		45.1	258	59.2		25.8				
24	62	58.2	219	54.5	-9	14.0	270	53.0	+13	44.8	274	01.5	+13	25.8				
Dif	—		+15		+1	+14		-3		+23		0		+25				

UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 46.7 ^m			Edad: 14.7 ^d PHE { 4 ^h : 60'6 12 ^h : 60'7 20 ^h : 60'9 PMG: **h **m R°: **m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	183	22.0	-20	30.1	13	41.5	44	+23	22.2	15 13	16 05	16 59	14 02 31	8 56 108				
1	198	21.9		30.6	28	04.9	43		31.8	27	14	17 04	25 40	33 100				
2	213	21.7		31.1	42	28.2	42		41.4	39	23	10	14 44 45	8 15 94				
3	228	21.5		31.6	56	51.4	40		50.7	49	30	14	15 00 48	7 59 91				
4	243	21.3		32.1	71	14.4	39	+23	59.9	15 58	37	19	14 50	46 88				
5	258	21.1	-20	32.6	85	37.3	38	+24	08.9	16 06	16 43	17 23	15 26 53	7 34 86				
6	273	21.0	-20	33.2	100	00.1	37	+24	17.8	16 24	16 56	17 32	15 52 55	7 10 82				
7	288	20.8		33.7	114	22.8	36		26.5	38	17 08	41	16 12 58	6 51 78				
8	303	20.6		34.2	128	45.4	34		35.0	16 50	17	48	29 60	34 77				
9	318	20.4		34.7	143	07.8	34		43.4	17 01	26	17 56	16 43 62	6 21 74				
10	333	20.2		35.2	157	30.2	32		51.6	19	43	18 10	17 09 63	5 57 71				
11	348	20.1	-20	35.7	171	52.4	32	+24	59.6	17 35	17 58	18 23	17 30 66	5 36 69				
12	3	19.9	-20	36.2	186	14.5	31	+25	07.4	17 50	18 12	18 38	17 51 67	5 17 66				
13	18	19.7		36.7	200	36.5	30		15.1	18 06	28	18 55	18 11 69	4 59 63				
14	33	19.5		37.2	214	58.4	29		22.5	22	18 46	19 15	33 71	38 61				
15	48	19.3		37.7	229	20.2	28		29.8	41	19 08	40	18 59 73	15 57				
16	63	19.2		38.2	243	41.9	27		36.9	18 53	21	19 56	19 14 74	4 01 55				
17	78	19.0	-20	38.7	258	03.5	26	+25	43.8	19 05	19 37	20 16	19 32 76	3 46 52				
18	93	18.8	-20	39.2	272	25.0	25	+25	50.6	19 21	19 56	20 42	19 53 78	3 27 49				
19	108	18.6		39.7	286	46.4	24	+25	57.1	40	20 21	21 18	20 21 79	3 04 44				
20	123	18.4		40.2	301	07.7	23	+26	03.5	49	33	21 37	34 81	2 53 41				
21	138	18.2		40.6	315	28.9	22		09.6	19 59	20 48	22 02	20 49 83	41 38				
22	153	18.1		41.1	329	50.0	21		15.6	20 11	21 04	22 40	21 07 86	26 34				
23	168	17.9		41.6	344	11.0	20		21.4	24	25	** **	30 88	2 10 28				
24	183	17.7	-20	42.1	358	32.0	20	+26	27.0	20 40	21 52	** **	21 58 96	1 50 18				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 44.9 ^m		Mag: -4.9 PMG: 9 ^h 19 ^m			Mag: +0.5 PMG: 5 ^h 56 ^m			Mag: -2.1 PMG: 5 ^h 43 ^m			Mag: +0.6 PMG: 20 ^h 19 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	62	58.2	219	54.5	-9	14.0	270	53.0	+13	44.8	274	01.5	+13	25.8	54	25.0	+0	50.8
1	78	00.6	234	56.0		14.0	285	54.4		44.5	289	03.8		25.8	69	27.5		50.8
2	93	03.1	249	57.4		13.9	300	55.9		44.2	304	06.1		25.7	84	30.0		50.7
3	108	05.6	264	58.9		13.8	315	57.3		43.9	319	08.4		25.7	99	32.6		50.7
4	123	08.0	280	00.3		13.8	330	58.8		43.6	334	10.8		25.6	114	35.1		50.7
5	138	10.5	295	01.7	-9	13.7	346	00.2	+13	43.3	349	13.1	+13	25.6	129	37.7	+0	50.7
6	153	13.0	310	03.2	-9	13.6	1	01.7	+13	43.0	4	15.4	+13	25.6	144	40.2	+0	50.7
7	168	15.4	325	04.6		13.6	16	03.2		42.7	19	17.7		25.5	159	42.7		50.6
8	183	17.9	340	06.0		13.5	31	04.6		42.4	34	20.0		25.5	174	45.3		50.6
9	198	20.4	355	07.4		13.4	46	06.1		42.1	49	22.3		25.4	189	47.8		50.6
10	213	22.8	10	08.9		13.4	61	07.5		41.8	64	24.7		25.4	204	50.3		50.6
11	228	25.3	25	10.3	-9	13.3	76	09.0	+13	41.5	79	27.0	+13	25.4	219	52.9	+0	50.5
12	243	27.7	40	11.7	-9	13.3	91	10.5	+13	41.2	94	29.3	+13	25.3	234	55.4	+0	50.5
13	258	30.2	55	13.1		13.2	106	11.9		40.9	109	31.6		25.3	249	57.9		50.5
14	273	32.7	70	14.5		13.2	121	13.4		40.6	124	33.9		25.2	265	00.5		50.5
15	288	35.1	85	15.9		13.1	136	14.9		40.3	139	36.3		25.2	280	03.0		50.5
16	303	37.6	100	17.3		13.1	151	16.3		40.0	154	38.6		25.1	295	05.5		50.4
17	318	40.1	115	18.7	-9	13.0	166	17.8	+13	39.7	169	40.9	+13	25.1	310	08.1	+0	50.4
18	333	42.5	130	20.1	-9	13.0	181	19.2	+13	39.4	184	43.2	+13	25.1	325	10.6	+0	50.4
19	348	45.0	145	21.5		12.9	196	20.7		39.1	199	45.5		25.0	340	13.1		50.4
20	3	47.5	160	22.9		12.9	211	22.2		38.8	214	47.9		25.0	355	15.7		50.4
21	18	49.9	175	24.3		12.9	226	23.6		38.5	229	50.2		24.9	10	18.2		50.4
22	33	52.4	190	25.7		12.8	241	25.1		38.2	244	52.5		24.9	25	20.7		50.3
23	48	54.9	205	27.1		12.8	256	26.6		37.9	259	54.8		24.9	40	23.3		50.3
24	63	57.3	220	28.5	-9	12.8	271	28.1	+13	37.6	274	57.1	+13	24.8	55	25.8	+0	50.3
Dif	—		+14		+1		+15		-3		+23		0		+25		0	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 47.0 ^m			Edad: 15.7 ^d SD: 16/6 PMG: 0 ^h 06 ^m PHE 4^h: 60'9 12^h: 61'0 20^h: 61'0 R°: 67^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	183	17.7	-20	42.1	358	32.0	19	+26	27.0	53	60 N	6 36	7 30	8 22	14 32	69 10 43	72 72	
1	198	17.5		42.6	12	52.9	18		32.3	52	58	30	20	8 08	15 03	70 10 11	72 72	
2	213	17.3		43.1	27	13.7	17		37.5	50	56	25	12	7 56		27 70	9 48	71 71
3	228	17.1		43.6	41	34.4	16		42.5	47	54	20	7 04	46 15	47 69		29 70	
4	243	16.9		44.1	55	55.0	16		47.2	46	52	15	6 58	36 16	03 69		9 12	71 71
5	258	16.8	-20	44.6	70	15.6	15	+26	51.8	44	50	6 11	6 51	7 28	16 17	69 8 58		71 71
6	273	16.6	-20	45.1	84	36.1	15	+26	56.2	41	45	6 02	6 38	7 11	16 46	69 8 30		70 70
7	288	16.4		45.6	98	56.6	14	+27	00.3	40	40	5 53	27	6 56	17 09	68 8 08		69 69
8	303	16.2		46.0	113	17.0	13		04.3	37	35	45	17	44	27 69		7 49	69 69
9	318	16.0		46.5	127	37.3	13		08.0	35	30	38	6 07	33 17	44 68		33 69	
10	333	15.8		47.0	141	57.6	12		11.5	34	20	24	5 51	6 15	18 11	68 7 06		68 68
11	348	15.6	-20	47.5	156	17.8	12	+27	14.9	31	10 N	5 10	5 36	5 59	18 35	67 6 43		68 68
12	3	15.4	-20	48.0	170	38.0	11	+27	18.0	29	0	4 56	5 21	5 43	18 57	67 6 22		67 67
13	18	15.2		48.5	184	58.1	11		20.9	26	10 S	39	5 05	28 19	19 66		6 00	67 67
14	33	15.1		49.0	199	18.2	11		23.5	25	20	4 19	4 47	5 11	19 43	65 5 37		66 66
15	48	14.9		49.4	213	38.3	10		26.0	23	30	3 53	25	4 52	20 10	65 5 10		65 65
16	63	14.7		49.9	227	58.3	10		28.3	20	35	37	4 12	41 20	27 64		4 55	63 63
17	78	14.5	-20	50.4	242	18.3	10	+27	30.3	18	40	3 17	3 56	4 28	20 46	64 4 36		63 63
18	93	14.3	-20	50.9	256	38.3	10	+27	32.1	16	45	2 51	3 37	4 12	21 09	63 4 14		62 62
19	108	14.1		51.4	270	58.3	9		33.7	14	50	2 16	12	3 53		39 61		3 46 60
20	123	13.9		51.8	285	18.2	9		35.1	12	52	1 56	3 00	44 21	54 60		33 59	
21	138	13.7		52.3	299	38.1	9		36.3	9	54	1 31	2 46	34 22	11 58		3 17	57 57
22	153	13.5		52.8	313	58.0	9		37.2	8	56	0 54	29	23 31	57		2 59	55 55
23	168	13.3		53.3	328	17.9	9		38.0	5	58	** **	2 08	3 09	22 57	54 36		52 52
24	183	13.1	-20	53.8	342	37.8	9	+27	38.5	5	60 S	** **	1 41	2 53	23 32	49 2 07		46 46

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 40.9 ^m		Mag: -4.9 PMG: 9 ^h 17 ^m		Mag: +0.5 PMG: 5 ^h 54 ^m		Mag: -2.2 PMG: 5 ^h 39 ^m		Mag: +0.6 PMG: 20 ^h 15 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	63	57.3	220	28.5	-9	12.8	271	28.1	+13	37.6	274	57.1	+13	24.8	55	25.8	+0	50.3
1	78	59.8	235	29.8		12.7	286	29.5		37.4	289	59.5		24.8	70	28.3		50.3
2	94	02.2	250	31.2		12.7	301	31.0		37.1	305	01.8		24.7	85	30.9		50.3
3	109	04.7	265	32.6		12.7	316	32.5		36.8	320	04.1		24.7	100	33.4		50.2
4	124	07.2	280	34.0		12.6	331	33.9		36.5	335	06.4		24.7	115	35.9		50.2
5	139	09.6	295	35.3	-9	12.6	346	35.4	+13	36.2	350	08.8	+13	24.6	130	38.5	+0	50.2
6	154	12.1	310	36.7	-9	12.6	1	36.9	+13	35.9	5	11.1	+13	24.6	145	41.0	+0	50.2
7	169	14.6	325	38.1		12.6	16	38.3		35.6	20	13.4		24.6	160	43.5		50.2
8	184	17.0	340	39.4		12.6	31	39.8		35.3	35	15.7		24.5	175	46.1		50.1
9	199	19.5	355	40.8		12.5	46	41.3		35.0	50	18.1		24.5	190	48.6		50.1
10	214	22.0	10	42.1		12.5	61	42.8		34.7	65	20.4		24.4	205	51.1		50.1
11	229	24.4	25	43.5	-9	12.5	76	44.2	+13	34.4	80	22.7	+13	24.4	220	53.7	+0	50.1
12	244	26.9	40	44.8	-9	12.5	91	45.7	+13	34.1	95	25.0	+13	24.4	235	56.2	+0	50.1
13	259	29.4	55	46.2		12.5	106	47.2		33.8	110	27.4		24.3	250	58.7		50.0
14	274	31.8	70	47.5		12.5	121	48.7		33.5	125	29.7		24.3	266	01.3		50.0
15	289	34.3	85	48.9		12.5	136	50.1		33.2	140	32.0		24.2	281	03.8		50.0
16	304	36.7	100	50.2		12.5	151	51.6		32.9	155	34.3		24.2	296	06.3		50.0
17	319	39.2	115	51.5	-9	12.4	166	53.1	+13	32.6	170	36.7	+13	24.2	311	08.9	+0	50.0
18	334	41.7	130	52.9	-9	12.4	181	54.6	+13	32.3	185	39.0	+13	24.1	326	11.4	+0	50.0
19	349	44.1	145	54.2		12.4	196	56.1		32.0	200	41.3		24.1	341	13.9		49.9
20	4	46.6	160	55.5		12.4	211	57.5		31.7	215	43.7		24.1	356	16.4		49.9
21	19	49.1	175	56.9		12.4	226	59.0		31.5	230	46.0		24.0	11	19.0		49.9
22	34	51.5	190	58.2		12.4	242	00.5		31.2	245	48.3		24.0	26	21.5		49.9
23	49	54.0	205	59.5		12.5	257	02.0		30.9	260	50.6		23.9	41	24.0		49.9
24	64	56.5	221	00.8	-9	12.5	272	03.5	+13	30.6	275	53.0	+13	23.9	56	26.6	+0	49.9
Dif	—		+13		0		+15		-3		+23		0		+25		0	

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'2 PMG:11 ^h 47.3 ^m			Edad: 16.7 ^d SD: 16'6 PMG: 1 ^h 13 ^m PHE { 4 ^h : 61'0 12 ^h : 61'0 20 ^h : 60'9 R°: 68 ^m								Civil			Náutico	Hora R°		Hora R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif													
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	m	h	m	m
0	183	13.1	-20	53.8	342	37.8		+27	38.5	3	60 N	15	10	16	02	16	56	15	41	106
1	198	12.9		54.2	356	57.7	9		38.8	1	58	24	12	17	02	16	13	98	11	23
2	213	12.8		54.7	11	17.6	9		38.9	1	56	36	21	08		37	92	10	59	45
3	228	12.6		55.2	25	37.5	9		38.8	1	54	47	28	13	16	56	89	39	49	
4	243	12.4		55.7	39	57.4	9		38.4	5	52	15	56	35	17	17	12	87	23	51
5	258	12.2	-20	56.1	54	17.3		+27	37.9	4	50	16	05	16	41	17	22	17	26	85
6	273	12.0	-20	56.6	68	37.3	10	+27	37.1	8	45	16	22	16	55	17	31	17	55	80
7	288	11.8		57.1	82	57.2	9		36.1	10	40	37	17	07	40	18	17	78	9	17
8	303	11.6		57.5	97	17.2	10		34.9	12	35	16	49	17	48	36	75	8	58	61
9	318	11.4		58.0	111	37.2	10		33.5	14	30	17	00	26	17	55	18	52	73	42
10	333	11.2		58.5	125	57.2	10		31.8	17	20	19		43	18	10	19	19	70	8
11	348	11.0	-20	59.0	140	17.3	11	+27	30.0	18	10 N	17	35	17	58	18	24	19	42	68
12	3	10.8	-20	59.4	154	37.4	11	+27	27.9	21	0	17	51	18	13	18	39	20	04	65
13	18	10.6	-20	59.9	168	57.6	12		25.6	23	10 S	18	07	29	18	56	25	63	7	07
14	33	10.4	-21	00.4	183	17.8	12		23.1	25	20	23	18	47	19	16	20	48	61	6
15	48	10.2		00.8	197	38.0	12		20.4	27	30	43	19	10	42	21	15	57	6	15
16	63	10.0		01.3	211	58.3	13		17.5	29	35	18	54	23	19	59	31	55	5	58
17	78	09.8	-21	01.8	226	18.7	14	+27	14.4	31	40	19	08	19	39	20	19	21	50	52
18	93	09.6	-21	02.2	240	39.1	14	+27	11.0	34	45	19	23	19	59	20	45	22	12	49
19	108	09.4		02.7	254	59.5	14		07.5	35	50	43	20	24	21	22	40	44	4	46
20	123	09.2		03.1	269	20.1	16	+27	03.7	38	52	19	52	37	21	42	22	54	41	32
21	138	09.0		03.6	283	40.7	16	+26	59.8	39	54	20	03	20	52	22	09	23	09	39
22	153	08.8		04.1	298	01.3	16		55.6	42	56	14	21	09	22	51	28	34	3	54
23	168	08.6		04.5	312	22.1	18		51.3	43	58	28	21	31	**	**	23	51	28	3
24	183	08.4	-21	05.0	326	42.9	18	+26	46.7	46	60 S	20	44	22	00	**	**	**	2	53

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 19 ^h 37.0 ^m			Mag: -4.9 PMG: 9 ^h 15 ^m			Mag: +0.5 PMG: 5 ^h 51 ^m			Mag: -2.2 PMG: 5 ^h 36 ^m			Mag: +0.6 PMG: 20 ^h 11 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°						
0	64	56.5	221	00.8	-9	12.5	272	03.5	+13	30.6	275	53.0	+13	23.9	56	26.6	+0	49.9			
1	79	58.9	236	02.1		12.5	287	04.9		30.3	290	55.3		23.9	71	29.1		49.8			
2	95	01.4	251	03.4		12.5	302	06.4		30.0	305	57.6		23.8	86	31.6		49.8			
3	110	03.9	266	04.7		12.5	317	07.9		29.7	321	00.0		23.8	101	34.1		49.8			
4	125	06.3	281	06.1		12.5	332	09.4		29.4	336	02.3		23.8	116	36.7		49.8			
5	140	08.8	296	07.4	-9	12.5	347	10.9	+13	29.1	351	04.6	+13	23.7	131	39.2	+0	49.8			
6	155	11.2	311	08.7	-9	12.5	2	12.4	+13	28.8	6	07.0	+13	23.7	146	41.7	+0	49.7			
7	170	13.7	326	10.0		12.5	17	13.8		28.5	21	09.3		23.7	161	44.3		49.7			
8	185	16.2	341	11.2		12.6	32	15.3		28.2	36	11.6		23.6	176	46.8		49.7			
9	200	18.6	356	12.5		12.6	47	16.8		27.9	51	14.0		23.6	191	49.3		49.7			
10	215	21.1	11	13.8		12.6	62	18.3		27.6	66	16.3		23.5	206	51.8		49.7			
11	230	23.6	26	15.1	-9	12.6	77	19.8	+13	27.4	81	18.6	+13	23.5	221	54.4	+0	49.7			
12	245	26.0	41	16.4	-9	12.7	92	21.3	+13	27.1	96	20.9	+13	23.5	236	56.9	+0	49.6			
13	260	28.5	56	17.7		12.7	107	22.8		26.8	111	23.3		23.4	251	59.4		49.6			
14	275	31.0	71	19.0		12.7	122	24.3		26.5	126	25.6		23.4	267	02.0		49.6			
15	290	33.4	86	20.2		12.7	137	25.7		26.2	141	28.0		23.4	282	04.5		49.6			
16	305	35.9	101	21.5		12.8	152	27.2		25.9	156	30.3		23.3	297	07.0		49.6			
17	320	38.4	116	22.8	-9	12.8	167	28.7	+13	25.6	171	32.6	+13	23.3	312	09.5	+0	49.6			
18	335	40.8	131	24.1	-9	12.8	182	30.2	+13	25.3	186	35.0	+13	23.3	327	12.1	+0	49.6			
19	350	43.3	146	25.3		12.9	197	31.7		25.0	201	37.3		23.2	342	14.6		49.5			
20	5	45.7	161	26.6		12.9	212	33.2		24.7	216	39.6		23.2	357	17.1		49.5			
21	20	48.2	176	27.8		13.0	227	34.7		24.5	231	42.0		23.2	12	19.6		49.5			
22	35	50.7	191	29.1		13.0	242	36.2		24.2	246	44.3		23.1	27	22.2		49.5			
23	50	53.1	206	30.4		13.1	257	37.7		23.9	261	46.6		23.1	42	24.7		49.5			
24	65	55.6	221	31.6	-9	13.1	272	39.2	+13	23.6	276	49.0	+13	23.1	57	27.2	+0	49.5			
Dif	—			+13			0			+15			-3			+23			0		

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 11 ^h 47.6 ^m			Edad: 17.7 ^d SD: 16/6 PMG: 2 ^h 19 ^m PHE 4^h: 60/8 12^h: 60/6 20^h: 60/5 R°: 63^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	183	08.4	-21	05.0	326	42.9	19	+26	46.7	60 N	6	39	7	33	8	26	112		
1	198	08.2		05.4	341	03.8	19		41.9	58	33		24	12	17	26	112		
2	213	08.0		05.9	355	24.7	21		37.0	56	28		15	8	00	18	08		
3	228	07.8		06.4	9	45.8	21		31.8	54	23		07	7	49	24	94		
4	243	07.6		06.8	24	06.9	21		26.4	52	18		00	7	49	37	91		
5	258	07.4	-21	07.3	38	28.2	23	+26	20.9	50	6	14	6	54	7	31	18		
6	273	07.2	-21	07.7	52	49.5	23	+26	15.1	45	6	04	6	40	7	13	19		
7	288	07.0		08.2	67	10.9	24		09.2	40	5	55		29	6	58	33		
8	303	06.8		08.6	81	32.4	25	+26	03.1	35	47		18	46	19	50	74		
9	318	06.6		09.1	95	54.0	26	+25	56.8	30	40		09	35	20	04	71		
10	333	06.4		09.6	110	15.7	27		50.3	20	25		52	16	28	67	9		
11	348	06.2	-21	10.0	124	37.6	29	+25	43.6	10 N	5	11	5	37	6	00	20		
12	3	06.0	-21	10.5	138	59.5	29	+25	36.7	0	4	56	5	22	5	44	21		
13	18	05.8		10.9	153	21.5	30		29.6	10 S	39		06	28	27	55	8		
14	33	05.6		11.4	167	43.6	31		22.4	20	4	19	4	47	5	11	21		
15	48	05.4		11.8	182	05.9	33		15.0	30	3	53		25	4	52	22		
16	63	05.2		12.3	196	28.2	33	+25	07.4	35	36		4	40	24	44	7		
17	78	04.9	-21	12.7	210	50.7	35	+24	59.6	40	3	16	3	55	4	27	22		
18	93	04.7	-21	13.2	225	13.3	36	+24	51.7	45	2	49	3	36	4	11	22		
19	108	04.5		13.6	239	36.0	37		43.6	50	2	12	3	10	3	52	23		
20	123	04.3		14.1	253	58.8	38		35.3	52	1	52		57	42	34	27		
21	138	04.1		14.5	268	21.7	39		26.9	54	1	25		43	32	23	46		
22	153	03.9		14.9	282	44.8	41		18.3	56	0	44		25	20	**	**		
23	168	03.7		15.4	297	08.0	42		09.5	58	**	**		2	04	3	06		
24	183	03.5	-21	15.8	311	31.3	43	+24	00.6	60 S	**	**		1	35	2	50		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 19 ^h 33.1 ^m		Mag: -4.9 PMG: 9 ^h 13 ^m		Mag: +0.5 PMG: 5 ^h 49 ^m		Mag: -2.2 PMG: 5 ^h 32 ^m		Mag: +0.6 PMG: 20 ^h 07 ^m							
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	65	55.6	221	31.6	-9	13.1	272	39.2	+13	23.6	276	49.0	+13	23.1	57	27.2
1	80	58.1	236	32.9		13.1	287	40.7		23.3	291	51.3		23.0	72	29.7
2	96	00.5	251	34.1		13.2	302	42.2		23.0	306	53.6		23.0	87	32.3
3	111	03.0	266	35.4		13.2	317	43.7		22.7	321	56.0		23.0	102	34.8
4	126	05.5	281	36.6		13.3	332	45.2		22.4	336	58.3		22.9	117	37.3
5	141	07.9	296	37.8	-9	13.3	347	46.7	+13	22.1	352	00.7	+13	22.9	132	39.8
6	156	10.4	311	39.1	-9	13.4	2	48.2	+13	21.9	7	03.0	+13	22.8	147	42.4
7	171	12.9	326	40.3		13.5	17	49.7		21.6	22	05.3		22.8	162	44.9
8	186	15.3	341	41.5		13.5	32	51.2		21.3	37	07.7		22.8	177	47.4
9	201	17.8	356	42.8		13.6	47	52.7		21.0	52	10.0		22.7	192	49.9
10	216	20.2	11	44.0		13.6	62	54.2		20.7	67	12.4		22.7	207	52.5
11	231	22.7	26	45.2	-9	13.7	77	55.7	+13	20.4	82	14.7	+13	22.7	222	55.0
12	246	25.2	41	46.4	-9	13.8	92	57.2	+13	20.1	97	17.0	+13	22.6	237	57.5
13	261	27.6	56	47.7		13.8	107	58.7		19.8	112	19.4		22.6	253	00.0
14	276	30.1	71	48.9		13.9	123	00.2		19.6	127	21.7		22.6	268	02.6
15	291	32.6	86	50.1		14.0	138	01.7		19.3	142	24.1		22.5	283	05.1
16	306	35.0	101	51.3		14.0	153	03.2		19.0	157	26.4		22.5	298	07.6
17	321	37.5	116	52.5	-9	14.1	168	04.7	+13	18.7	172	28.7	+13	22.5	313	10.1
18	336	40.0	131	53.7	-9	14.2	183	06.2	+13	18.4	187	31.1	+13	22.5	328	12.6
19	351	42.4	146	54.9		14.2	198	07.7		18.1	202	33.4		22.4	343	15.2
20	6	44.9	161	56.1		14.3	213	09.2		17.8	217	35.8		22.4	358	17.7
21	21	47.4	176	57.3		14.4	228	10.7		17.6	232	38.1		22.4	13	20.2
22	36	49.8	191	58.5		14.5	243	12.2		17.3	247	40.5		22.3	28	22.7
23	51	52.3	206	59.7		14.6	258	13.7		17.0	262	42.8		22.3	43	25.3
24	66	54.7	222	00.9	-9	14.6	273	15.2	+13	16.7	277	45.1	+13	22.3	58	27.8
Dif	—		+12		-1		+15		-3		+23		0		+25	

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG:11 ^h 47.9 ^m			Edad: 18.7 ^d SD: 16'5 PMG: 3 ^h 22 ^m PHE { 4 ^h : 60'3 12 ^h : 60'1 20 ^h : 59'9 R°: 59 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /	° /		° /		°	h m	h m	h m	h m	h m	h m	h m	h m
0	183 03.5	-21 15.8		311 31.3		+24 00.6		60 N	15 07	16 00	16 54	19 18 109	12 39 7			
1	198 03.3		16.3	325 54.7	44	+23 51.5	91	58	21	10	17 01	34 102	23 12			
2	213 03.1		16.7	340 18.2	47		42.3 92	56	34	19	06	47 98	12 09 17			
3	228 02.9		17.2	354 41.9	48		32.9 94	54	45	27	11	19 58 94	11 57 20			
4	243 02.7		17.6	9 05.7	49		23.3 96	52	15 54	34	16	20 08 91	46 24			
5	258 02.4	-21 18.0		23 29.6		+23 13.6	97	50	16 03	16 40	17 21	20 17 88	11 36 27			
6	273 02.2	-21 18.5		37 53.7	51	+23 03.8	98	45	16 21	16 54	17 31	20 36 82	11 16 33			
7	288 02.0		18.9	52 17.9	52	+22 53.8	100	40	36	17 06	39	20 51 77	10 59 37			
8	303 01.8		19.4	66 42.2	53		43.7 101	35	16 49	16	48	21 04 73	45 41			
9	318 01.6		19.8	81 06.6	54		33.4 103	30	17 00	26	17 55	15 70	33 44			
10	333 01.4		20.2	95 31.2	56		23.0 104	20	19	43	18 10	35 64	10 12 49			
11	348 01.2	-21 20.7		109 55.9	57	+22 12.4	106	10 N	17 36	17 58	18 24	21 51 59	9 54 53			
12	3 01.0	-21 21.1		124 20.7	58	+22 01.7	107	0	17 52	18 14	18 40	22 07 54	9 36 58			
13	18 00.8		21.5	138 45.7	60	+21 50.9	108	10 S	18 08	30	18 57	22 50	19 62			
14	33 00.5		22.0	153 10.8	61		40.0 109	20	25	18 49	19 17	38 46	9 00 66			
15	48 00.3		22.4	167 36.0	62		28.9 111	30	45	19 11	19 44	22 57 40	8 38 72			
16	63 00.1		22.8	182 01.4	64		17.7 112	35	18 56	25	20 01	23 08 37	25 75			
17	77 59.9	-21 23.3		196 26.9	65	+21 06.4	113	40	19 10	19 42	20 21	23 20 33	8 10 79			
18	92 59.7	-21 23.7		210 52.5	66	+20 54.9	115	45	19 26	20 02	20 48	23 35 28	7 53 83			
19	107 59.5		24.1	225 18.2	67		43.4 115	50	46	28	21 26	23 52 23	30 90			
20	122 59.3		24.6	239 44.1	69		31.7 117	52	19 55	41	21 48	** ** *	20 92			
21	137 59.0		25.0	254 10.1	70		19.9 118	54	20 06	20 56	22 16	** ** *	7 08 96			
22	152 58.8		25.4	268 36.3	72	+20 07.9	120	56	18	21 14	23 04	0 01 21	6 54 100			
23	167 58.6		25.9	283 02.5	72	+19 55.9	120	58	32	21 37	** ** *	18 15	37 106			
24	182 58.4	-21 26.3		297 28.9	74	+19 43.8	121	60 S	20 49	22 07	** ** *	0 38 9	6 18 113			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 19 ^h 29.1 ^m			Mag: -4.9 PMG: 9 ^h 11 ^m			Mag: +0.5 PMG: 5 ^h 46 ^m			Mag: -2.2 PMG: 5 ^h 28 ^m			Mag: +0.6 PMG: 20 ^h 03 ^m			
	hG ♈	hG ♊	Dec	hG ♂	Dec	hG ♏	Dec	hG ♏	Dec	hG ♏	Dec	hG ♏	Dec			
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /			
0	66 54.7	222 00.9	-9 14.6	273 15.2	+13 16.7	277 45.1	+13 22.3	58 27.8	+0 49.1							
1	81 57.2	237 02.1	14.7	288 16.7	16.4	292 47.5	22.2	73 30.3	49.1							
2	96 59.7	252 03.3	14.8	303 18.2	16.1	307 49.8	22.2	88 32.8	49.1							
3	112 02.1	267 04.5	14.9	318 19.8	15.8	322 52.2	22.2	103 35.3	49.1							
4	127 04.6	282 05.7	15.0	333 21.3	15.6	337 54.5	22.1	118 37.9	49.0							
5	142 07.1	297 06.8	-9 15.1	348 22.8	+13 15.3	352 56.9	+13 22.1	133 40.4	+0 49.0							
6	157 09.5	312 08.0	-9 15.2	3 24.3	+13 15.0	7 59.2	+13 22.1	148 42.9	+0 49.0							
7	172 12.0	327 09.2	15.3	18 25.8	14.7	23 01.6	22.0	163 45.4	49.0							
8	187 14.5	342 10.4	15.4	33 27.3	14.4	38 03.9	22.0	178 47.9	49.0							
9	202 16.9	357 11.5	15.5	48 28.8	14.1	53 06.3	22.0	193 50.5	49.0							
10	217 19.4	12 12.7	15.6	63 30.3	13.9	68 08.6	21.9	208 53.0	49.0							
11	232 21.9	27 13.9	-9 15.6	78 31.9	+13 13.6	83 11.0	+13 21.9	223 55.5	+0 49.0							
12	247 24.3	42 15.0	-9 15.7	93 33.4	+13 13.3	98 13.3	+13 21.9	238 58.0	+0 48.9							
13	262 26.8	57 16.2	15.9	108 34.9	13.0	113 15.6	21.9	254 00.5	48.9							
14	277 29.2	72 17.3	16.0	123 36.4	12.7	128 18.0	21.8	269 03.1	48.9							
15	292 31.7	87 18.5	16.1	138 37.9	12.4	143 20.3	21.8	284 05.6	48.9							
16	307 34.2	102 19.6	16.2	153 39.4	12.2	158 22.7	21.8	299 08.1	48.9							
17	322 36.6	117 20.8	-9 16.3	168 41.0	+13 11.9	173 25.0	+13 21.7	314 10.6	+0 48.9							
18	337 39.1	132 21.9	-9 16.4	183 42.5	+13 11.6	188 27.4	+13 21.7	329 13.1	+0 48.9							
19	352 41.6	147 23.1	16.5	198 44.0	11.3	203 29.7	21.7	344 15.7	48.8							
20	7 44.0	162 24.2	16.6	213 45.5	11.0	218 32.1	21.6	359 18.2	48.8							
21	22 46.5	177 25.4	16.7	228 47.0	10.8	233 34.4	21.6	14 20.7	48.8							
22	37 49.0	192 26.5	16.8	243 48.6	10.5	248 36.8	21.6	29 23.2	48.8							
23	52 51.4	207 27.6	17.0	258 50.1	10.2	263 39.1	21.6	44 25.7	48.8							
24	67 53.9	222 28.8	-9 17.1	273 51.6	+13 09.9	278 41.5	+13 21.5	59 28.2	+0 48.8							
Dif	—	+12	-1	+15	-3	+23	0	+25	0							

ALMANAQUE NÁUTICO PERSEUS

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 11 ^h 48.6 ^m			Edad: 20.7 ^d SD: 16'1 PMG: 5 ^h 12 ^m PHE { 4 ^h : 58'9 12 ^h : 58'6 20 ^h : 58'4 Rº: 49 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	Rº	Hora	Rº		
h	° /	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	m	h m	m				
0	182	53.1	-21	36.3	284	39.7	+14	24.9	60 N	15 04	15 58	16 53	22 45	95	12 47	2			
1	197	52.9		36.7	299	09.1	+14	10.7	58	19	16 08	16 59	50	91	40	7			
2	212	52.7		37.1	313	38.6	+13	56.4	56	32	17	17 05	55	87	35	9			
3	227	52.5		37.5	328	08.2		42.1	54	43	25	10	22	59	84	30	12		
4	242	52.2		38.0	342	37.9		27.7	52	15 53	32	15	23	02	82	25	15		
5	257	52.0	-21	38.4	357	07.7	+13	13.2	50	16 02	16 39	17 20	23	05	80	12	21	17	
6	272	51.8	-21	38.8	11	37.7	+12	58.7	45	16 20	16 53	17 30	23	13	74	12	12	22	
7	287	51.6		39.2	26	07.7		44.1	40	36	17 06	39	19	69	12	04	26		
8	302	51.3		39.6	40	37.8		29.5	35	16 48	16	47	24	65	11	57	31		
9	317	51.1		40.0	55	08.0		14.9	30	17 00	26	17 55	28	63	52	33			
10	332	50.9		40.4	69	38.3	+12	00.2	20	19	43	18 10	36	56	41	39			
11	347	50.6	-21	40.8	84	08.7	+11	45.4	10 N	17 36	17 59	18 25	23	42	52	11	32	44	
12	2	50.4	-21	41.2	98	39.2	+11	30.7	0	17 52	18 15	18 40	23	49	47	11	24	48	
13	17	50.2		41.6	113	09.8		15.8	10 S	18 09	31	18 58	23	55	42	15	53		
14	32	50.0		42.0	127	40.5	+11	01.0	20	26	18 50	19 19	**	**	**	11	06	58	
15	47	49.7		42.4	142	11.3	+10	46.1	30	46	19 13	19 46	**	**	**	10	55	64	
16	62	49.5		42.8	156	42.1		31.1	35	18 58	27	20 03	**	**	**	49	67		
17	77	49.3	-21	43.2	171	13.1	+10	16.1	40	19 12	19 44	20 24	**	**	**	10	42	71	
18	92	49.1	-21	43.6	185	44.1	+10	01.1	45	19 28	20 04	20 51	0	02	23	10	33	76	
19	107	48.8		44.0	200	15.2	+9	46.1	50	49	31	21 31	14	18	23	82			
20	122	48.6		44.4	214	46.4		31.0	52	19 58	20 44	21 53	19	16	18	84			
21	137	48.4		44.8	229	17.7		15.9	54	20 09	21 00	22 23	26	13	13	87			
22	152	48.1		45.2	243	49.1	+9	00.8	56	22	19	23 20	32	10	07	91			
23	167	47.9		45.6	258	20.5	+8	45.6	58	36	21 42	**	**	40	7	10	01	94	
24	182	47.7	-21	45.9	272	52.0	+8	30.5	60 S	20 54	22 14	**	**	0	49	2	9	53	98

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 21.3 ^m		Mag: -4.9 PMG: 9 ^h 08 ^m			Mag: +0.5 PMG: 5 ^h 42 ^m			Mag: -2.2 PMG: 5 ^h 21 ^m			Mag: +0.6 PMG: 19 ^h 55 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /				
0	68	53.0	222	55.2	-9	20.3	274	28.3	+13	03.2	279	38.0	+13	20.9	60	28.6	+0	48.5
1	83	55.5	237	56.3		20.5	289	29.8		03.0	294	40.4		20.8	75	31.1		48.5
2	98	58.0	252	57.4		20.6	304	31.4		02.7	309	42.8		20.8	90	33.6		48.5
3	114	00.4	267	58.5		20.8	319	32.9		02.4	324	45.1		20.8	105	36.2		48.5
4	129	02.9	282	59.5		21.0	334	34.5		02.1	339	47.5		20.8	120	38.7		48.5
5	144	05.3	298	00.6	-9	21.1	349	36.0	+13	01.9	354	49.8	+13	20.7	135	41.2	+0	48.5
6	159	07.8	313	01.7	-9	21.3	4	37.5	+13	01.6	9	52.2	+13	20.7	150	43.7	+0	48.5
7	174	10.3	328	02.7		21.4	19	39.1		01.3	24	54.6		20.7	165	46.2		48.4
8	189	12.7	343	03.8		21.6	34	40.6		01.0	39	56.9		20.7	180	48.7		48.4
9	204	15.2	358	04.8		21.8	49	42.2		00.8	54	59.3		20.6	195	51.2		48.4
10	219	17.7	13	05.9		21.9	64	43.7		00.5	70	01.6		20.6	210	53.7		48.4
11	234	20.1	28	06.9	-9	22.1	79	45.3	+13	00.2	85	04.0	+13	20.6	225	56.3	+0	48.4
12	249	22.6	43	08.0	-9	22.3	94	46.8	+12	59.9	100	06.4	+13	20.6	240	58.8	+0	48.4
13	264	25.1	58	09.0		22.4	109	48.3		59.7	115	08.7		20.5	256	01.3		48.4
14	279	27.5	73	10.1		22.6	124	49.9		59.4	130	11.1		20.5	271	03.8		48.4
15	294	30.0	88	11.1		22.8	139	51.4		59.1	145	13.5		20.5	286	06.3		48.4
16	309	32.5	103	12.1		23.0	154	53.0		58.9	160	15.8		20.5	301	08.8		48.4
17	324	34.9	118	13.2	-9	23.1	169	54.5	+12	58.6	175	18.2	+13	20.4	316	11.3	+0	48.4
18	339	37.4	133	14.2	-9	23.3	184	56.1	+12	58.3	190	20.5	+13	20.4	331	13.8	+0	48.3
19	354	39.8	148	15.3		23.5	199	57.6		58.0	205	22.9		20.4	346	16.3		48.3
20	9	42.3	163	16.3		23.7	214	59.2		57.8	220	25.3		20.4	1	18.9		48.3
21	24	44.8	178	17.3		23.9	230	00.7		57.5	235	27.6		20.3	16	21.4		48.3
22	39	47.2	193	18.3		24.0	245	02.3		57.2	250	30.0		20.3	31	23.9		48.3
23	54	49.7	208	19.4		24.2	260	03.8		57.0	265	32.4		20.3	46	26.4		48.3
24	69	52.2	223	20.4	-9	24.4	275	05.4	+12	56.7	280	34.7	+13	20.3	61	28.9	+0	48.3
Dif	—		+10		-2		+15		-3		+24		0		+25			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 49.0 ^m			Edad: 21.7 ^d SD: 15/9 PMG: 6 ^h 00 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	182	47.7	-21	45.9	272	52.0	+8	30.5	60 N	6	46	7	41	8	35	**	**	**
1	197	47.4		46.3	287	23.6	+8	15.3	58	39		30		20	**	**	**	
2	212	47.2		46.7	301	55.3	+8	00.0	56	33		21		8	07	**	**	**
3	227	47.0		47.1	316	27.0	+7	44.8	54	28		13		7	55	**	**	**
4	242	46.8		47.5	330	58.9		29.5	52	23		7	06	45	**	**	**	
5	257	46.5	-21	47.9	345	30.7	+7	14.2	50	6	18	6	59	7	37	**	**	**
6	272	46.3	-21	48.3	0	02.7	+6	58.9	45	6	08	6	45	7	18	**	**	**
7	287	46.1		48.7	14	34.7		43.6	40	5	59	32	7	02	**	**	**	
8	302	45.8		49.1	29	06.8		28.3	35	50		22	6	49	**	**	**	
9	317	45.6		49.4	43	38.9	+6	12.9	30	43		6	12	38	**	**	**	
10	332	45.4		49.8	58	11.1	+5	57.6	20	28		5	55	19	**	**	**	
11	347	45.1	-21	50.2	72	43.4	+5	42.2	10 N	5	13	5	39	6	01	**	**	**
12	2	44.9	-21	50.6	87	15.8	+5	26.8	0	4	57	5	23	5	45	**	**	**
13	17	44.7		51.0	101	48.1	+5	11.4	10 S	40		5	06	29	**	**	**	
14	32	44.4		51.4	116	20.6	+4	56.1	20	4	19	4	47	5	12	0	02	36
15	47	44.2		51.8	130	53.1		40.7	30	3	52	24	4	51	09	31	11	58
16	62	43.9		52.1	145	25.7		25.3	35	35		4	10	39	14	27	55	63
17	77	43.7	-21	52.5	159	58.3	+4	09.9	40	3	13	3	54	4	25	0	18	24
18	92	43.5	-21	52.9	174	30.9	+3	54.4	45	2	46	3	33	4	09	0	24	20
19	107	43.2		53.3	189	03.6		39.0	50	2	07	3	06	3	49	31	14	43
20	122	43.0		53.7	203	36.4		23.6	52	1	45	2	53	39	34	12	41	79
21	137	42.8		54.0	218	09.2	+3	08.2	54	1	15	37	28	37	10	39	81	
22	152	42.5		54.4	232	42.1	+2	52.8	56	0	17	2	19	15	41	7	36	85
23	167	42.3		54.8	247	15.0		37.4	58	**	**	1	55	3	01	45	4	33
24	182	42.1	-21	55.2	261	47.9	+2	22.0	60 S	**	**	1	23	2	43	0	50	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 19 ^h 17.4 ^m		Mag: -4.9 PMG: 9 ^h 06 ^m		Mag: +0.5 PMG: 5 ^h 39 ^m		Mag: -2.2 PMG: 5 ^h 17 ^m		Mag: +0.6 PMG: 19 ^h 51 ^m	
h	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	69	52.2	223	20.4	-9	24.4	275	05.4	+12	56.7
1	84	54.6	238	21.4		24.6	290	06.9		56.4
2	99	57.1	253	22.4		24.8	305	08.5		56.1
3	114	59.6	268	23.4		25.0	320	10.0		55.9
4	130	02.0	283	24.4		25.2	335	11.6		55.6
5	145	04.5	298	25.4	-9	25.4	350	13.1	+12	55.3
6	160	06.9	313	26.5	-9	25.6	5	14.7	+12	55.1
7	175	09.4	328	27.5		25.7	20	16.2		54.8
8	190	11.9	343	28.5		25.9	35	17.8		54.5
9	205	14.3	358	29.5		26.1	50	19.4		54.2
10	220	16.8	13	30.5		26.3	65	20.9		54.0
11	235	19.3	28	31.5	-9	26.5	80	22.5	+12	53.7
12	250	21.7	43	32.5	-9	26.7	95	24.0	+12	53.4
13	265	24.2	58	33.4		26.9	110	25.6		53.2
14	280	26.7	73	34.4		27.1	125	27.1		52.9
15	295	29.1	88	35.4		27.4	140	28.7		52.6
16	310	31.6	103	36.4		27.6	155	30.3		52.4
17	325	34.1	118	37.4	-9	27.8	170	31.8	+12	52.1
18	340	36.5	133	38.4	-9	28.0	185	33.4	+12	51.8
19	355	39.0	148	39.4		28.2	200	35.0		51.6
20	10	41.4	163	40.3		28.4	215	36.5		51.3
21	25	43.9	178	41.3		28.6	230	38.1		51.0
22	40	46.4	193	42.3		28.8	245	39.6		50.8
23	55	48.8	208	43.2		29.0	260	41.2		50.5
24	70	51.3	223	44.2	-9	29.3	275	42.8	+12	50.2
Dif	—		+10		-2		+16		-3	
									+24	
									0	
									+25	

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 49.4 ^m				Edad: 22.7 ^d SD: 15/7 PMG: 6 ^h 45 ^m PHE { 4 ^h : 57/4 12 ^h : 57/1 20 ^h : 56/9 Rº: 45 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	Rº	Hora	Rº		
h	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	h m	h m	h m	h m m	h m m	h m m			
0	182 42.1	-21 55.2	261 47.9	+2 22.0	154	60 N	15 02	15 56	16 51	0 19 91	12 48 2					
1	197 41.8	55.5	276 20.9	+2 06.6	154	58	17	16 06	16 58	20 88	49 5					
2	212 41.6	55.9	290 53.9	+1 51.3	153	56	30	16	17 04	21 85	49 8					
3	227 41.3	56.3	305 27.0	35.9	154	54	41	24	09	22 82	50 10					
4	242 41.1	56.7	320 00.1	20.5	154	52	15 52	31	14	23 79	50 13					
5	257 40.9	-21 57.0	334 33.2	+1 05.2	153	50	16 01	16 38	17 19	0 24 76	12 51 15					
6	272 40.6	-21 57.4	349 06.4	+0 49.8	154	45	16 20	16 53	17 29	0 25 72	12 51 20					
7	287 40.4	57.8	3 39.6	34.5	153	40	35	17 05	39	27 67	52 24					
8	302 40.2	58.1	18 12.8	19.2	153	35	16 48	16	47	28 64	53 27					
9	317 39.9	58.5	32 46.1	+0 03.9	153	30	17 00	26	17 55	29 61	53 31					
10	332 39.7	58.9	47 19.4	-0 11.4	153	20	19	43	18 10	31 55	54 36					
11	347 39.4	-21 59.2	61 52.7	-0 26.7	153	10 N	17 37	17 59	18 25	0 33 50	12 55 40					
12	2 39.2	-21 59.6	76 26.1	-0 42.0	153	0	17 53	18 15	18 41	0 34 46	12 55 45					
13	17 38.9	-22 00.0	90 59.5	-0 57.2	152	10 S	18 10	32	18 59	36 41	56 50					
14	32 38.7	-22 00.3	105 32.9	-1 12.4	152	20	27	18 52	19 20	38 36	57 54					
15	47 38.5	00.7	120 06.3	27.6	152	30	18 48	19 15	19 48	40 30	58 59					
16	62 38.2	01.1	134 39.7	42.8	152	35	19 00	29	20 05	41 27	58 63					
17	77 38.0	-22 01.4	149 13.2	-1 58.0	152	40	19 14	19 46	20 26	0 42 24	12 59 66					
18	92 37.7	-22 01.8	163 46.7	-2 13.1	151	45	19 31	20 07	20 54	0 44 19	12 59 71					
19	107 37.5	02.2	178 20.2	28.2	151	50	19 51	34	21 35	45 15	13 00 76					
20	122 37.3	02.5	192 53.7	43.3	151	52	20 01	20 48	21 58	46 13	00 79					
21	137 37.0	02.9	207 27.3	-2 58.3	150	54	12	21 04	22 29	47 11	00 82					
22	152 36.8	03.2	222 00.8	-3 13.4	151	56	25	23	** **	48 8	01 84					
23	167 36.5	03.6	236 34.4	28.4	150	58	40	21 47	** **	49 5	01 88					
24	182 36.3	-22 04.0	251 08.0	-3 43.3	149	60 S	20 58	22 22	** **	0 50 2	13 02 91					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 19 ^h 13.4 ^m		Mag: -4.9 PMG: 9 ^h 04 ^m		Mag: +0.5 PMG: 5 ^h 37 ^m		Mag: -2.2 PMG: 5 ^h 13 ^m		Mag: +0.6 PMG: 19 ^h 47 ^m							
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	hG ♄	Dec	hG ♅	Dec						
h	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "						
0	70 51.3	223 44.2	-9 29.3	275 42.8	+12 50.2	281 31.6	+13 19.7	62 29.1	+0 48.1							
1	85 53.8	238 45.2	29.5	290 44.3	50.0	296 34.0	19.7	77 31.6	48.1							
2	100 56.2	253 46.1	29.7	305 45.9	49.7	311 36.4	19.7	92 34.1	48.1							
3	115 58.7	268 47.1	29.9	320 47.5	49.4	326 38.8	19.7	107 36.6	48.1							
4	131 01.2	283 48.1	30.1	335 49.0	49.2	341 41.1	19.6	122 39.1	48.1							
5	146 03.6	298 49.0	-9 30.4	350 50.6	+12 48.9	356 43.5	+13 19.6	137 41.6	+0 48.1							
6	161 06.1	313 50.0	-9 30.6	5 52.2	+12 48.6	11 45.9	+13 19.6	152 44.1	+0 48.1							
7	176 08.5	328 50.9	30.8	20 53.8	48.4	26 48.3	19.6	167 46.6	48.1							
8	191 11.0	343 51.9	31.0	35 55.3	48.1	41 50.6	19.6	182 49.1	48.1							
9	206 13.5	358 52.8	31.3	50 56.9	47.8	56 53.0	19.5	197 51.6	48.0							
10	221 15.9	13 53.8	31.5	65 58.5	47.6	71 55.4	19.5	212 54.1	48.0							
11	236 18.4	28 54.7	-9 31.7	81 00.0	+12 47.3	86 57.8	+13 19.5	227 56.6	+0 48.0							
12	251 20.9	43 55.7	-9 32.0	96 01.6	+12 47.1	102 00.2	+13 19.5	242 59.1	+0 48.0							
13	266 23.3	58 56.6	32.2	111 03.2	46.8	117 02.5	19.5	258 01.6	48.0							
14	281 25.8	73 57.5	32.4	126 04.8	46.5	132 04.9	19.4	273 04.1	48.0							
15	296 28.3	88 58.5	32.7	141 06.3	46.3	147 07.3	19.4	288 06.6	48.0							
16	311 30.7	103 59.4	32.9	156 07.9	46.0	162 09.7	19.4	303 09.1	48.0							
17	326 33.2	119 00.3	-9 33.1	171 09.5	+12 45.7	177 12.0	+13 19.4	318 11.6	+0 48.0							
18	341 35.7	134 01.3	-9 33.4	186 11.1	+12 45.5	192 14.4	+13 19.4	333 14.1	+0 48.0							
19	356 38.1	149 02.2	33.6	201 12.6	45.2	207 16.8	19.3	348 16.7	48.0							
20	11 40.6	164 03.1	33.9	216 14.2	45.0	222 19.2	19.3	3 19.2	48.0							
21	26 43.0	179 04.0	34.1	231 15.8	44.7	237 21.6	19.3	18 21.7	48.0							
22	41 45.5	194 05.0	34.4	246 17.4	44.4	252 23.9	19.3	33 24.2	48.0							
23	56 48.0	209 05.9	34.6	261 19.0	44.2	267 26.3	19.3	48 26.7	48.0							
24	71 50.4	224 06.8	-9 34.8	276 20.5	+12 43.9	282 28.7	+13 19.3	63 29.2	+0 48.0							
Dif	—	+9	-2	+16	-3	+24	0	+25	0							

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'2 PMG: 11 ^h 49.8 ^m				Edad: 23.7 ^d SD: 15'5 PMG: 7 ^h 29 ^m																
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m		
0	182	36.3	-22	04.0	251	08.0	-3	43.3	60 N	6	49	7	44	8	39	1	49	89	12	49	1
1	197	36.0		04.3	265	41.5	-3	58.3	58	42		33		23		46	86		53	4	
2	212	35.8		04.7	280	15.1	-4	13.2	56	36		24		8	10	44	82		56	7	
3	227	35.5		05.0	294	48.8		28.1	54	31		16		7	58	42	79	12	59	10	
4	242	35.3		05.4	309	22.4		42.9	52	25		08		48		40	77	13	02	12	
5	257	35.1	-22	05.7	323	56.0	-4	57.7	50	6	21	7	02	7	39	1	39	74	13	04	15
6	272	34.8	-22	06.1	338	29.6	-5	12.5	45	6	10	6	47	7	20	1	35	70	13	10	19
7	287	34.6		06.4	353	03.2		27.3	40	6	01		34	7	04	33	64		15	23	
8	302	34.3		06.8	7	36.9		42.0	35	5	52		23	6	51	30	61		19	26	
9	317	34.1		07.1	22	10.5	-5	56.7	30	44		6	14	40		28	58		22	30	
10	332	33.8		07.5	36	44.1	-6	11.3	20	29		5	56	20		24	53		28	35	
11	347	33.6	-22	07.8	51	17.7	-6	25.9	10 N	5	14	5	40	6	02	1	21	48	13	34	39
12	2	33.3	-22	08.2	65	51.4	-6	40.4	0	4	58	5	24	5	46	1	18	44	13	39	44
13	17	33.1		08.5	80	25.0	-6	55.0	10 S	40		5	07	30		15	39		44	48	
14	32	32.8		08.9	94	58.6	-7	09.4	20	4	19	4	48	5	12	12	35		50	52	
15	47	32.6		09.2	109	32.2		23.9	30	3	51		24	4	51	09	29		13	56	58
16	62	32.3		09.6	124	05.8		38.3	35	34		4	10	39		07	26		14	00	61
17	77	32.1	-22	09.9	138	39.4	-7	52.6	40	3	12	3	53	4	25	1	05	22	14	04	65
18	92	31.8	-22	10.3	153	13.0	-8	06.9	45	2	44	3	32	4	08	1	02	19	14	09	69
19	107	31.6		10.6	167	46.6		21.1	50	2	04	3	05	3	48	0	59	14		14	75
20	122	31.3		11.0	182	20.1		35.3	52	1	41	2	51		38	58	11		17	77	
21	137	31.1		11.3	196	53.7	-8	49.5	54	1	10		35	26		56	10		20	79	
22	152	30.8		11.6	211	27.2	-9	03.6	56	** **		2	16	3	14		54	7		23	83
23	167	30.6		12.0	226	00.7		17.7	58	** **		1	51	2	59		53	3		27	86
24	182	30.3	-22	12.3	240	34.2	-9	31.7	60 S	** **		1	17	2	41	0	51	0	14	31	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 09.5 ^m		Mag: -4.9 PMG: 9 ^h 03 ^m		Mag: +0.4 PMG: 5 ^h 34 ^m		Mag: -2.2 PMG: 5 ^h 09 ^m		Mag: +0.6 PMG: 19 ^h 43 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	71	50.4	224	06.8	-9	34.8	276	20.5	+12	43.9
1	86	52.9	239	07.7		35.1	291	22.1		43.6
2	101	55.4	254	08.6		35.3	306	23.7		43.4
3	116	57.8	269	09.5		35.6	321	25.3		43.1
4	132	00.3	284	10.5		35.8	336	26.9		42.9
5	147	02.8	299	11.4	-9	36.1	351	28.5	+12	42.6
6	162	05.2	314	12.3	-9	36.4	6	30.0	+12	42.3
7	177	07.7	329	13.2		36.6	21	31.6		42.1
8	192	10.2	344	14.1		36.9	36	33.2		41.8
9	207	12.6	359	15.0		37.1	51	34.8		41.6
10	222	15.1	14	15.9		37.4	66	36.4		41.3
11	237	17.5	29	16.8	-9	37.6	81	38.0	+12	41.1
12	252	20.0	44	17.6	-9	37.9	96	39.6	+12	40.8
13	267	22.5	59	18.5		38.2	111	41.1		40.5
14	282	24.9	74	19.4		38.4	126	42.7		40.3
15	297	27.4	89	20.3		38.7	141	44.3		40.0
16	312	29.9	104	21.2		39.0	156	45.9		39.8
17	327	32.3	119	22.1	-9	39.2	171	47.5	+12	39.5
18	342	34.8	134	23.0	-9	39.5	186	49.1	+12	39.2
19	357	37.3	149	23.8		39.8	201	50.7		39.0
20	12	39.7	164	24.7		40.0	216	52.3		38.7
21	27	42.2	179	25.6		40.3	231	53.9		38.5
22	42	44.6	194	26.5		40.6	246	55.5		38.2
23	57	47.1	209	27.3		40.9	261	57.1		38.0
24	72	49.6	224	28.2	-9	41.1	276	58.7	+12	37.7
Dif	—		+9		-3		+16		-3	
							+24		0	
									+25	
									0	

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 11 ^h 50.2 ^m				Edad: 24.7 ^d SD: 15/3 PMG: 8 ^h 12 ^m PHE { 4 ^h : 56/0 12 ^h : 55/9 20 ^h : 55/7 R°: 46 ^m													
	hG ☉	Dec			hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	182	30.3	-22	12.3	240	34.2	-9	31.7	60 N	14 59	15 54	16 50	3 18 91	12 50 3				
1	197	30.1		12.7	255	07.7		45.6	58	15 15	16 05	16 57	12 87	12 57 7				
2	212	29.8		13.0	269	41.2	-9	59.5	56	29	14	17 03	06 84	13 03 11				
3	227	29.6		13.3	284	14.7	-10	13.4	54	40	23	08	3 01 81	09 14				
4	242	29.3		13.7	298	48.1		27.2	52	15 50	30	13	2 57 78	14 16				
5	257	29.1	-22	14.0	313	21.5	-10	40.9	50	16 00	16 37	17 18	2 53 75	13 19 18				
6	272	28.8	-22	14.3	327	54.9	-10	54.6	45	16 19	16 52	17 29	2 45 70	13 29 24				
7	287	28.6		14.7	342	28.3	-11	08.3	40	35	17 05	39	37 67	38 27				
8	302	28.3		15.0	357	01.6		21.8	35	16 48	16	47	31 63	45 31				
9	317	28.1		15.3	11	34.9		35.4	30	17 00	26	17 55	26 60	13 52 33				
10	332	27.8		15.7	26	08.2	-11	48.8	20	20	17 44	18 11	17 54	14 03 39				
11	347	27.6	-22	16.0	40	41.5	-12	02.2	10 N	17 37	18 00	18 26	2 09 50	14 13 43				
12	2	27.3	-22	16.3	55	14.8	-12	15.6	0	17 54	18 16	18 42	2 02 45	14 23 46				
13	17	27.1		16.7	69	48.0		28.8	10 S	18 11	33	19 00	1 54 42	32 51				
14	32	26.8		17.0	84	21.2		42.0	20	29	18 53	22	47 37	42 55				
15	47	26.6		17.3	98	54.3	-12	55.2	30	18 49	19 17	19 49	38 32	14 54 60				
16	62	26.3		17.7	113	27.5	-13	08.3	35	19 02	31	20 07	33 29	15 01 63				
17	77	26.0	-22	18.0	128	00.6	-13	21.3	40	19 16	19 48	20 29	1 27 26	15 09 66				
18	92	25.8	-22	18.3	142	33.6	-13	34.3	45	19 33	20 09	20 57	1 21 22	15 18 70				
19	107	25.5		18.6	157	06.6	-13	47.1	50	19 54	37	21 39	13 17	29 75				
20	122	25.3		19.0	171	39.6	-14	00.0	52	20 04	20 51	22 02	09 15	34 77				
21	137	25.0		19.3	186	12.6	-14	12.7	54	15	21 07	22 36	06 12	39 81				
22	152	24.8		19.6	200	45.5		25.4	56	29	27	** **	1 01 10	46 83				
23	167	24.5		19.9	215	18.4		38.0	58	20 44	21 52	** **	0 56 7	15 53 87				
24	182	24.3	-22	20.3	229	51.3	-14	50.5	60 S	21 02	22 29	** **	0 51 3	16 01 92				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 05.6 ^m		Mag: -4.8 PMG: 9 ^h 02 ^m		Mag: +0.4 PMG: 5 ^h 31 ^m		Mag: -2.2 PMG: 5 ^h 05 ^m		Mag: +0.6 PMG: 19 ^h 39 ^m									
	hG ♈	hG ♀		Dec	hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	72	49.6	224	28.2	-9	41.1	276	58.7	+12	37.7	283	26.0	+13	18.8	64	29.1	+0	47.9
1	87	52.0	239	29.1		41.4	292	00.3		37.5	298	28.4		18.8	79	31.6		47.9
2	102	54.5	254	29.9		41.7	307	01.9		37.2	313	30.8		18.8	94	34.1		47.9
3	117	57.0	269	30.8		42.0	322	03.5		36.9	328	33.1		18.8	109	36.6		47.9
4	132	59.4	284	31.7		42.2	337	05.1		36.7	343	35.5		18.8	124	39.1		47.9
5	148	01.9	299	32.5	-9	42.5	352	06.7	+12	36.4	358	37.9	+13	18.8	139	41.6	+0	47.8
6	163	04.4	314	33.4	-9	42.8	7	08.3	+12	36.2	13	40.3	+13	18.8	154	44.1	+0	47.8
7	178	06.8	329	34.2		43.1	22	09.9		35.9	28	42.7		18.7	169	46.6		47.8
8	193	09.3	344	35.1		43.4	37	11.5		35.7	43	45.1		18.7	184	49.1		47.8
9	208	11.8	359	35.9		43.7	52	13.1		35.4	58	47.5		18.7	199	51.6		47.8
10	223	14.2	14	36.8		44.0	67	14.7		35.2	73	49.9		18.7	214	54.1		47.8
11	238	16.7	29	37.6	-9	44.2	82	16.3	+12	34.9	88	52.3	+13	18.7	229	56.6	+0	47.8
12	253	19.1	44	38.5	-9	44.5	97	17.9	+12	34.7	103	54.7	+13	18.7	244	59.1	+0	47.8
13	268	21.6	59	39.3		44.8	112	19.5		34.4	118	57.1		18.7	260	01.6		47.8
14	283	24.1	74	40.1		45.1	127	21.1		34.2	133	59.5		18.6	275	04.1		47.8
15	298	26.5	89	41.0		45.4	142	22.7		33.9	149	01.9		18.6	290	06.6		47.8
16	313	29.0	104	41.8		45.7	157	24.3		33.7	164	04.2		18.6	305	09.1		47.8
17	328	31.5	119	42.6	-9	46.0	172	25.9	+12	33.4	179	06.6	+13	18.6	320	11.6	+0	47.8
18	343	33.9	134	43.5	-9	46.3	187	27.5	+12	33.1	194	09.0	+13	18.6	335	14.1	+0	47.8
19	358	36.4	149	44.3		46.6	202	29.1		32.9	209	11.4		18.6	350	16.6		47.8
20	13	38.9	164	45.1		46.9	217	30.7		32.6	224	13.8		18.6	5	19.1		47.8
21	28	41.3	179	46.0		47.2	232	32.3		32.4	239	16.2		18.5	20	21.6		47.8
22	43	43.8	194	46.8		47.5	247	33.9		32.1	254	18.6		18.5	35	24.0		47.8
23	58	46.3	209	47.6		47.8	262	35.6		31.9	269	21.0		18.5	50	26.5		47.8
24	73	48.7	224	48.4	-9	48.1	277	37.2	+12	31.6	284	23.4	+13	18.5	65	29.0	+0	47.8
Dif	—		+8		-3		+16		-3		+24		0		+25		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 50.6 ^m			Edad: 25.7 ^d SD: 15 ^h 1 PMG: 8 ^h 57 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil			Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	24.3	-22	20.3	229	51.3	-14	50.5	60 N	6	52	7	47	8	42	4	48
1	197	24.0		20.6	244	24.1	138	-15	03.0	58	45	36	27	38	86	13	03
2	212	23.7		20.9	258	56.9	138		15.4	56	39	27	13	29	82	12	13
3	227	23.5		21.2	273	29.6	137		27.7	54	33	18	8	01	21	79	21
4	242	23.2		21.5	288	02.3	137		40.0	52	28	11	7	51	13	77	29
5	257	23.0	-22	21.9	302	35.0	137	-15	52.2	50	6	23	7	04	4	07	74
6	272	22.7	-22	22.2	317	07.6	136	-16	04.3	45	6	12	6	49	3	53	69
7	287	22.5		22.5	331	40.2	136		16.3	40	6	02	36	7	06	42	65
8	302	22.2		22.8	346	12.7	135		28.2	35	5	54	25	6	53	33	61
9	317	21.9		23.1	0	45.2	135		40.1	30	45	6	15	41	24	59	24
10	332	21.7		23.4	15	17.7	135	-16	51.9	20	30	5	57	21	3	10	54
11	347	21.4	-22	23.8	29	50.1	134	-17	03.6	10 N	5	15	5	41	6	03	2
12	2	21.2	-22	24.1	44	22.5	134	-17	15.2	0	4	58	5	25	5	47	2
13	17	20.9		24.4	58	54.8	133		26.7	10 S	40	5	07	30	35	42	21
14	32	20.6		24.7	73	27.1	133		38.2	20	4	19	4	48	5	12	22
15	47	20.4		25.0	87	59.3	132	-17	49.6	30	3	51	24	4	51	09	33
16	62	20.1		25.3	102	31.5	132	-18	00.8	35	34	4	10	39	2	01	30
17	77	19.9	-22	25.6	117	03.6	131	-18	12.1	40	3	12	3	52	4	25	1
18	92	19.6	-22	25.9	131	35.7	131	-18	23.2	45	2	43	3	31	4	08	1
19	107	19.3		26.2	146	07.7	130		34.2	50	2	02	3	03	3	47	29
20	122	19.1		26.5	160	39.7	130		45.1	52	1	38	2	50	36	23	16
21	137	18.8		26.8	175	11.7	130	-18	56.0	54	1	05	33	25	16	14	16
22	152	18.6		27.2	189	43.6	129	-19	06.7	56	**	**	2	13	3	12	09
23	167	18.3		27.5	204	15.4	128		17.4	58	**	**	1	48	2	57	1
24	182	18.0	-22	27.8	218	47.2	128	-19	28.0	60 S	**	**	1	12	2	38	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 19 ^h 01.6 ^m		Mag: -4.8 PMG: 9 ^h 00 ^m		Mag: +0.4 PMG: 5 ^h 29 ^m		Mag: -2.2 PMG: 5 ^h 02 ^m		Mag: +0.6 PMG: 19 ^h 35 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	73	48.7	224	48.4	-9	48.1	277	37.2	+12	31.6
1	88	51.2	239	49.3		48.4	292	38.8		31.4
2	103	53.6	254	50.1		48.7	307	40.4		31.1
3	118	56.1	269	50.9		49.0	322	42.0		30.9
4	133	58.6	284	51.7		49.3	337	43.6		30.6
5	149	01.0	299	52.5	-9	49.6	352	45.2	+12	30.4
6	164	03.5	314	53.3	-9	49.9	7	46.9	+12	30.1
7	179	06.0	329	54.1		50.2	22	48.5		29.9
8	194	08.4	344	54.9		50.6	37	50.1		29.7
9	209	10.9	359	55.7		50.9	52	51.7		29.4
10	224	13.4	14	56.5		51.2	67	53.3		29.2
11	239	15.8	29	57.3	-9	51.5	82	54.9	+12	28.9
12	254	18.3	44	58.1	-9	51.8	97	56.6	+12	28.7
13	269	20.7	59	58.9		52.1	112	58.2		28.4
14	284	23.2	74	59.7		52.4	127	59.8		28.2
15	299	25.7	90	00.5		52.8	143	01.4		27.9
16	314	28.1	105	01.3		53.1	158	03.0		27.7
17	329	30.6	120	02.1	-9	53.4	173	04.7	+12	27.4
18	344	33.1	135	02.9	-9	53.7	188	06.3	+12	27.2
19	359	35.5	150	03.7		54.1	203	07.9		26.9
20	14	38.0	165	04.4		54.4	218	09.5		26.7
21	29	40.5	180	05.2		54.7	233	11.2		26.4
22	44	42.9	195	06.0		55.0	248	12.8		26.2
23	59	45.4	210	06.8		55.4	263	14.4		26.0
24	74	47.9	225	07.6	-9	55.7	278	16.1	+12	25.7
Dif	—		+8		-3		+16		-2	
								+24		0
										+25

UT	SOL			● LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 51.0 ^m			Edad: 26.7 ^d SD: 15'0 PMG: 9 ^h 43 ^m PHE { 4 ^h : 55'1 12 ^h : 54'9 20 ^h : 54'8 R°: 50 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora	R°				
h	° /	° /	° /	° /		° /		°	h m	h m	h m	h m m	h m m	h m m	h m m						
0	182	18.0	-22	27.8		218	47.2	128	-19	28.0	105	60 N	14 57	15 53	16 49	6 20 94	12 55 9				
1	197	17.8		28.1		233	19.0	104		38.5	104	58	15 14	16 04	16 56	6 04 88	13 11 16				
2	212	17.5		28.4		247	50.7	103		48.9	103	56	27	14	17 02	5 51 83	25 20				
3	227	17.2		28.7		262	22.3	102	-19	59.2	102	54	39	22	08	40 79	37 23				
4	242	17.0		29.0		276	53.9	101	-20	09.4	101	52	50	30	13	30 76	48 26				
5	257	16.7	-22	29.3		291	25.5	100	-20	19.5	100	50	15 59	16 37	17 18	5 21 74	13 57 29				
6	272	16.4	-22	29.6		305	57.0	99	-20	29.5	99	45	16 19	16 52	17 29	5 02 69	14 17 33				
7	287	16.2		29.9		320	28.4	98		39.4	98	40	35	17 05	39	4 47 65	33 37				
8	302	15.9		30.2		334	59.8	97		49.2	97	35	16 48	16	47	34 62	47 39				
9	317	15.7		30.5		349	31.2	96	-20	59.0	96	30	17 00	26	17 56	23 60	14 59 41				
10	332	15.4		30.8		4	02.5	95	-21	08.6	95	20	20	17 44	18 11	4 04 56	15 20 45				
11	347	15.1	-22	31.1		18	33.7	94	-21	18.1	94	10 N	17 38	18 01	18 27	3 47 53	15 38 48				
12	2	14.9	-22	31.3		33	04.9	93	-21	27.5	93	0	17 55	18 17	18 43	3 32 49	15 55 50				
13	17	14.6		31.6		47	36.1	92		36.8	92	10 S	18 12	35	19 01	17 46	16 12 53				
14	32	14.3		31.9		62	07.1	91		46.0	91	20	30	18 54	23	3 01 42	30 56				
15	47	14.1		32.2		76	38.2	90	-21	55.2	90	30	18 51	19 18	19 51	2 42 39	16 51 60				
16	62	13.8		32.5		91	09.2	89	-22	04.2	89	35	19 03	33	20 09	31 37	17 03 62				
17	77	13.5	-22	32.8		105	40.1	88	-22	13.1	88	40	19 18	19 50	20 31	2 19 34	17 18 64				
18	92	13.3	-22	33.1		120	11.0	87	-22	21.8	87	45	19 35	20 12	21 00	2 05 30	17 35 67				
19	107	13.0		33.4		134	41.8	86		30.5	86	50	19 56	40	21 42	1 47 26	17 56 72				
20	122	12.7		33.7		149	12.6	85		39.1	85	52	20 07	20 54	22 07	39 23	18 06 74				
21	137	12.5		34.0		163	43.4	84		47.6	84	54	18	21 11	22 42	30 20	17 77				
22	152	12.2		34.3		178	14.0	83	-22	55.9	83	56	32	31	** **	20 17	30 81				
23	167	11.9		34.5		192	44.7	82	-23	04.2	82	58	20 47	21 57	** **	1 08 13	18 45 86				
24	182	11.7	-22	34.8		207	15.3	81	-23	12.3	81	60 S	21 06	22 36	** **	0 55 7	19 04 92				
UT	ARIES PMG 18 ^h 57.7 ^m			VENUS Mag: -4.8 PMG: 8 ^h 59 ^m			MARTE Mag: +0.4 PMG: 5 ^h 26 ^m			JÚPITER Mag: -2.2 PMG: 4 ^h 58 ^m			SATURNO Mag: +0.6 PMG: 19 ^h 31 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /						
0	74	47.9	225	07.6	-9	55.7	278	16.1	+12	25.7	285	21.0	+13	18.2	66	28.8	+0	47.8			
1	89	50.3	240	08.3		56.0	293	17.7		25.5	300	23.5		18.2	81	31.3		47.8			
2	104	52.8	255	09.1		56.3	308	19.3		25.2	315	25.9		18.2	96	33.8		47.8			
3	119	55.2	270	09.9		56.7	323	20.9		25.0	330	28.3		18.2	111	36.3		47.8			
4	134	57.7	285	10.6		57.0	338	22.6		24.7	345	30.7		18.2	126	38.8		47.8			
5	150	00.2	300	11.4	-9	57.3	353	24.2	+12	24.5	0	33.1	+13	18.2	141	41.3	+0	47.8			
6	165	02.6	315	12.2	-9	57.7	8	25.8	+12	24.3	15	35.5	+13	18.2	156	43.8	+0	47.8			
7	180	05.1	330	12.9		58.0	23	27.5		24.0	30	37.9		18.2	171	46.2		47.8			
8	195	07.6	345	13.7		58.4	38	29.1		23.8	45	40.3		18.2	186	48.7		47.8			
9	210	10.0	0	14.4		58.7	53	30.7		23.5	60	42.7		18.1	201	51.2		47.8			
10	225	12.5	15	15.2		59.0	68	32.4		23.3	75	45.1		18.1	216	53.7		47.8			
11	240	15.0	30	16.0	-9	59.4	83	34.0	+12	23.0	90	47.5	+13	18.1	231	56.2	+0	47.8			
12	255	17.4	45	16.7	-9	59.7	98	35.6	+12	22.8	105	49.9	+13	18.1	246	58.7	+0	47.8			
13	270	19.9	60	17.5	-10	00.1	113	37.3		22.6	120	52.3		18.1	262	01.2		47.8			
14	285	22.4	75	18.2		00.4	128	38.9		22.3	135	54.8		18.1	277	03.7		47.8			
15	300	24.8	90	19.0		00.7	143	40.5		22.1	150	57.2		18.1	292	06.1		47.8			
16	315	27.3	105	19.7		01.1	158	42.2		21.8	165	59.6		18.1	307	08.6		47.8			
17	330	29.7	120	20.4	-10	01.4	173	43.8	+12	21.6	181	02.0	+13	18.1	322	11.1	+0	47.8			
18	345	32.2	135	21.2	-10	01.8	188	45.5	+12	21.4	196	04.4	+13	18.1	337	13.6	+0	47.8			
19	0	34.7	150	21.9		02.1	203	47.1		21.1	211	06.8		18.1	352	16.1		47.8			
20	15	37.1	165	22.7		02.5	218	48.7		20.9	226	09.2		18.1	7	18.6		47.8			
21	30	39.6	180	23.4		02.8	233	50.4		20.6	241	11.6		18.1	22	21.1		47.8			
22	45	42.1	195	24.1		03.2	248	52.0		20.4	256	14.0		18.0	37	23.5		47.8			
23	60	44.5	210	24.9		03.5	263	53.7		20.2	271	16.5		18.0	52	26.0		47.8			
24	75	47.0	225	25.6	-10	03.9	278	55.3	+12	19.9	286	18.9	+13	18.0	67	28.5	+0	47.8			
Dif	—			+8			-3			+16			-2			+24			0		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2 PMG: 11 ^h 51.4 ^m				Edad: 27.7 ^d SD: 14 ^h 9 PMG: 10 ^h 32 ^m												
	PHE { 4 ^h : 54 ^h /7 12 ^h : 54 ^h /6 20 ^h : 54 ^h /5 Rº: 50 ^m				hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	11.7	-22	34.8	207	15.3	-23	12.3	60 N	6 54	7 50	8 46	7 52	88	13 03	17	
1	197	11.4		35.1	221	45.8		20.4	58	47	39	30	31	80		25	
2	212	11.1		35.4	236	16.3		28.3	56	41	29	16	7 13	75		43	
3	227	10.9		35.7	250	46.7		36.1	54	35	21	8 04	6 58	72	13 59	31	
4	242	10.6		36.0	265	17.1		43.8	52	30	13	7 53	45	70	14 12	34	
5	257	10.3	-22	36.2	279	47.5	-23	51.3	50	6 25	7 06	7 44	6 33	68	14 24	36	
6	272	10.1	-22	36.5	294	17.7	-23	58.8	45	6 14	6 51	7 24	6 10	64	14 49	39	
7	287	09.8		36.8	308	48.0	-24	06.1	40	6 04	38	7 08	5 51	61	15 08	42	
8	302	09.5		37.1	323	18.2		13.4	35	5 55	27	6 55	35	59		25	
9	317	09.2		37.4	337	48.3		20.5	30	47	6 17	43	5 21	58	15 39	45	
10	332	09.0		37.6	352	18.4		27.5	20	31	5 58	22	4 58	55	16 03	47	
11	347	08.7	-22	37.9	6	48.5	-24	34.4	10 N	5 16	5 42	6 05	4 38	53	16 24	49	
12	2	08.4	-22	38.2	21	18.5	-24	41.1	0	4 59	5 25	5 48	4 20	50	16 44	51	
13	17	08.2		38.5	35	48.5		47.8	10 S	41	5 08	31	4 02	47	17 04	52	
14	32	07.9		38.7	50	18.4	-24	54.3	20	4 19	4 48	5 13	3 42	45		25	
15	47	07.6		39.0	64	48.3	-25	00.7	30	3 51	24	4 51	19	43	17 49	57	
16	62	07.3		39.3	79	18.1		06.9	35	33	4 10	39	3 06	41	18 04	58	
17	77	07.1	-22	39.6	93	47.9	-25	13.1	40	3 11	3 52	4 24	2 51	38	18 21	59	
18	92	06.8	-22	39.8	108	17.7	-25	19.1	45	2 42	3 31	4 07	2 33	35	18 41	61	
19	107	06.5		40.1	122	47.4		25.0	50	2 00	3 02	3 46	11	31	19 06	65	
20	122	06.3		40.4	137	17.1		30.8	52	1 36	2 48	36	2 01	29		19	
21	137	06.0		40.6	151	46.7		36.5	54	1 00	32	24	1 49	26	33	68	
22	152	05.7		40.9	166	16.3		42.0	56	** **	2 11	3 11	35	23	19 49	71	
23	167	05.4		41.2	180	45.9		47.4	58	** **	1 45	2 55	20	18	20 09	75	
24	182	05.2	-22	41.5	195	15.4	-25	52.7	60 S	** **	1 06	2 36	1 01	12	20 34	81	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 18 ^h 53.8 ^m		Mag: -4.8 PMG: 8 ^h 58 ^m		Mag: +0.4 PMG: 5 ^h 24 ^m		Mag: -2.2 PMG: 4 ^h 54 ^m		Mag: +0.6 PMG: 19 ^h 27 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	75	47.0	225	25.6	-10	03.9	278	55.3	+12	19.9	286	18.9	+13	18.0	67	28.5	+0	47.8
1	90	49.5	240	26.3		04.2	293	57.0		19.7	301	21.3		18.0	82	31.0		47.8
2	105	51.9	255	27.1		04.6	308	58.6		19.4	316	23.7		18.0	97	33.5		47.8
3	120	54.4	270	27.8		05.0	324	00.3		19.2	331	26.1		18.0	112	36.0		47.8
4	135	56.9	285	28.5		05.3	339	01.9		19.0	346	28.5		18.0	127	38.5		47.8
5	150	59.3	300	29.2	-10	05.7	354	03.5	+12	18.7	1	30.9	+13	18.0	142	40.9	+0	47.8
6	166	01.8	315	29.9	-10	06.0	9	05.2	+12	18.5	16	33.3	+13	18.0	157	43.4	+0	47.8
7	181	04.2	330	30.7		06.4	24	06.8		18.3	31	35.8		18.0	172	45.9		47.9
8	196	06.7	345	31.4		06.7	39	08.5		18.0	46	38.2		18.0	187	48.4		47.9
9	211	09.2	0	32.1		07.1	54	10.1		17.8	61	40.6		18.0	202	50.9		47.9
10	226	11.6	15	32.8		07.5	69	11.8		17.5	76	43.0		18.0	217	53.4		47.9
11	241	14.1	30	33.5	-10	07.8	84	13.4	+12	17.3	91	45.4	+13	18.0	232	55.8	+0	47.9
12	256	16.6	45	34.2	-10	08.2	99	15.1	+12	17.1	106	47.8	+13	17.9	247	58.3	+0	47.9
13	271	19.0	60	34.9		08.6	114	16.8		16.8	121	50.3		17.9	263	00.8		47.9
14	286	21.5	75	35.6		08.9	129	18.4		16.6	136	52.7		17.9	278	03.3		47.9
15	301	24.0	90	36.3		09.3	144	20.1		16.4	151	55.1		17.9	293	05.8		47.9
16	316	26.4	105	37.0		09.7	159	21.7		16.1	166	57.5		17.9	308	08.3		47.9
17	331	28.9	120	37.7	-10	10.0	174	23.4	+12	15.9	181	59.9	+13	17.9	323	10.7	+0	47.9
18	346	31.3	135	38.4	-10	10.4	189	25.0	+12	15.7	197	02.3	+13	17.9	338	13.2	+0	47.9
19	1	33.8	150	39.1		10.8	204	26.7		15.4	212	04.8		17.9	353	15.7		47.9
20	16	36.3	165	39.8		11.2	219	28.3		15.2	227	07.2		17.9	8	18.2		47.9
21	31	38.7	180	40.5		11.5	234	30.0		15.0	242	09.6		17.9	23	20.7		47.9
22	46	41.2	195	41.2		11.9	249	31.7		14.7	257	12.0		17.9	38	23.1		47.9
23	61	43.7	210	41.9		12.3	264	33.3		14.5	272	14.4		17.9	53	25.6		47.9
24	76	46.1	225	42.6	-10	12.7	279	35.0	+12	14.3	287	16.9	+13	17.9	68	28.1	+0	47.9
Dif	—		+7		-4		+17		-2		+24		0		+25			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG:11 ^h 51.9 ^m				Edad: 28.7 ^d SD: 14'8 PMG: 11 ^h 22 ^m PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2 R°: 53 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°		h m	h m	h m	h m m	h m m	h m m			
0	182	05.2	-22	41.5	195	15.4	-25	52.7	51	60 N	14 56	15 52	16 48	9 20	73	13 20 37	
1	197	04.9		41.7	209	44.9	-25	57.8	51	58	15 12	16 03	16 55	8 51	68	13 49 42	
2	212	04.6		42.0	224	14.3	-26	02.9	49	56	26	13	17 01	28	66	14 12 44	
3	227	04.3		42.2	238	43.8		07.8	49	54	38	21	07	8 10	64	30 46	
4	242	04.1		42.5	253	13.2		12.5	47	52	49	29	13	7 55	62	14 46 47	
5	257	03.8	-22	42.8	267	42.5	-26	17.2	47	50	15 58	16 36	17 18	7 41	61	15 00 47	
6	272	03.5	-22	43.0	282	11.8	-26	21.7	45	45	16 18	16 52	17 29	7 14	59	15 28 49	
7	287	03.2		43.3	296	41.1		26.1	44	40	35	17 05	39	6 52	58	15 50 50	
8	302	03.0		43.6	311	10.4		30.3	42	35	16 48	16	48	34	57	16 08 50	
9	317	02.7		43.8	325	39.6		34.5	42	30	17 00	26	17 56	6 19	56	24 51	
10	332	02.4		44.1	340	08.8		38.5	40	20	21	17 45	18 12	5 53	55	16 50 52	
11	347	02.1	-22	44.3	354	38.0	-26	42.3	38	10 N	17 39	18 01	18 28	5 31	53	17 13 53	
12	2	01.9	-22	44.6	9	07.1	-26	46.1	38	0	17 56	18 18	18 44	5 10	53	17 35 53	
13	17	01.6		44.9	23	36.3		49.7	36	10 S	18 13	36	19 03	4 49	52	17 56 53	
14	32	01.3		45.1	38	05.4		53.1	34	20	31	18 55	25	27	50	18 19 54	
15	47	01.0		45.4	52	34.5		56.5	34	30	18 52	19 20	19 53	4 02	48	18 46 54	
16	62	00.8		45.6	67	03.5	-26	59.7	32	35	19 05	34	20 11	3 47	47	19 02 54	
17	77	00.5	-22	45.9	81	32.6	-27	02.7	30	40	19 20	19 52	20 33	3 29	47	19 20 55	
18	92	00.2	-22	46.1	96	01.6	-27	05.7	30	45	19 37	20 14	21 03	3 08	45	19 42 56	
19	106	59.9		46.4	110	30.6		08.5	28	50	19 59	42	21 46	2 42	43	20 11 56	
20	121	59.7		46.6	124	59.6		11.2	27	52	20 09	20 57	22 11	30	41	25 56	
21	136	59.4		46.9	139	28.6		13.7	25	54	21	21 14	22 49	2 15	39	20 41 56	
22	151	59.1		47.1	153	57.5		16.1	24	56	34	21 35	** **	1 58	37	21 00 57	
23	166	58.8		47.4	168	26.5		18.4	23	58	20 50	22 02	** **	38	33	24 57	
24	181	58.6	-22	47.6	182	55.4	-27	20.5	21	60 S	21 10	22 43	** **	1 13	27	21 55 59	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 18 ^h 49.8 ^m		Mag: -4.8 PMG: 8 ^h 57 ^m		Mag: +0.4 PMG: 5 ^h 21 ^m		Mag: -2.2 PMG: 4 ^h 50 ^m		Mag: +0.6 PMG: 19 ^h 23 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	76	46.1	225	42.6	-10	12.7	279	35.0	+12	14.3	287	16.9	+13	17.9	68	28.1	+0	47.9
1	91	48.6	240	43.3		13.0	294	36.6		14.0	302	19.3		17.9	83	30.6		47.9
2	106	51.1	255	44.0		13.4	309	38.3		13.8	317	21.7		17.9	98	33.1		47.9
3	121	53.5	270	44.7		13.8	324	40.0		13.6	332	24.1		17.9	113	35.5		47.9
4	136	56.0	285	45.3		14.2	339	41.6		13.3	347	26.6		17.9	128	38.0		47.9
5	151	58.5	300	46.0	-10	14.6	354	43.3	+12	13.1	2	29.0	+13	17.9	143	40.5	+0	47.9
6	167	00.9	315	46.7	-10	14.9	9	45.0	+12	12.9	17	31.4	+13	17.9	158	43.0	+0	47.9
7	182	03.4	330	47.4		15.3	24	46.6		12.7	32	33.8		17.9	173	45.5		47.9
8	197	05.8	345	48.0		15.7	39	48.3		12.4	47	36.2		17.9	188	47.9		47.9
9	212	08.3	0	48.7		16.1	54	50.0		12.2	62	38.7		17.9	203	50.4		48.0
10	227	10.8	15	49.4		16.5	69	51.6		12.0	77	41.1		17.8	218	52.9		48.0
11	242	13.2	30	50.1	-10	16.9	84	53.3	+12	11.7	92	43.5	+13	17.8	233	55.4	+0	48.0
12	257	15.7	45	50.7	-10	17.2	99	55.0	+12	11.5	107	45.9	+13	17.8	248	57.9	+0	48.0
13	272	18.2	60	51.4		17.6	114	56.6		11.3	122	48.4		17.8	264	00.3		48.0
14	287	20.6	75	52.1		18.0	129	58.3		11.0	137	50.8		17.8	279	02.8		48.0
15	302	23.1	90	52.7		18.4	145	00.0		10.8	152	53.2		17.8	294	05.3		48.0
16	317	25.6	105	53.4		18.8	160	01.6		10.6	167	55.6		17.8	309	07.8		48.0
17	332	28.0	120	54.0	-10	19.2	175	03.3	+12	10.4	182	58.1	+13	17.8	324	10.3	+0	48.0
18	347	30.5	135	54.7	-10	19.6	190	05.0	+12	10.1	198	00.5	+13	17.8	339	12.7	+0	48.0
19	2	33.0	150	55.4		20.0	205	06.7		09.9	213	02.9		17.8	354	15.2		48.0
20	17	35.4	165	56.0		20.4	220	08.3		09.7	228	05.3		17.8	9	17.7		48.0
21	32	37.9	180	56.7		20.8	235	10.0		09.5	243	07.8		17.8	24	20.2		48.0
22	47	40.3	195	57.3		21.2	250	11.7		09.2	258	10.2		17.8	39	22.6		48.0
23	62	42.8	210	58.0		21.6	265	13.4		09.0	273	12.6		17.8	54	25.1		48.0
24	77	45.3	225	58.6	-10	22.0	280	15.0	+12	08.8	288	15.1	+13	17.8	69	27.6	+0	48.0
Dif	—		+7		-4		+17		-2		+24		0		+25		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 52.3 ^m			Edad: 29.7 ^d SD: 14/8 PMG: 12 ^h 14 ^m												
	PHE { 4 ^h : 54/2 12 ^h : 54/1 20 ^h : 54/1 Rº: 51 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	181	58.6	-22	182	55.4	-27	20.5	60 N	6 57	7 53	8 49	10 31	43	13 56	64	
1	196	58.3		197	24.3		22.5	58	50	42	33	9 57	46	14 30	61	
2	211	58.0		211	53.2		24.4	56	43	32	19	32	47	14 55	59	
3	226	57.7		226	22.1		26.1	54	37	23	8 06	9 12	48	15 15	58	
4	241	57.4		240	51.0		27.7	52	32	15	7 56	8 55	49	32	57	
5	256	57.2	-22	255	19.9	-27	29.2	50	6 27	7 08	7 46	8 41	49	15 46	57	
6	271	56.9	-22	269	48.8	-27	30.5	45	6 16	6 53	7 26	8 12	49	16 15	56	
7	286	56.6		284	17.7		31.7	40	6 06	40	7 10	7 49	50	38	55	
8	301	56.3		298	46.6		32.7	35	5 57	28	6 56	30	50	16 57	54	
9	316	56.0		313	15.5		33.7	30	48	18	44	7 14	50	17 13	54	
10	331	55.8		327	44.3		34.5	20	32	6 00	24	6 47	50	17 41	52	
11	346	55.5	-22	342	13.2	-27	35.1	10 N	5 17	5 43	6 06	6 23	51	18 04	52	
12	1	55.2	-22	356	42.1	-27	35.6	0	5 00	5 26	5 49	6 01	52	18 26	51	
13	16	54.9		50.8	11	11.0	36.0	10 S	4 42	5 09	31	5 39	52	18 48	50	
14	31	54.6		51.0	25	39.9	36.2	20	4 20	4 49	5 13	5 16	52	19 12	49	
15	46	54.4		51.3	40	08.8	36.4	30	3 51	24	4 52	4 49	52	39	48	
16	61	54.1		51.5	54	37.7	36.3	35	33	4 10	39	33	52	19 55	47	
17	76	53.8	-22	51.7	69	06.6	-27	40	3 11	3 52	4 24	4 14	52	20 14	46	
18	91	53.5	-22	52.0	83	35.6	-27	45	2 41	3 30	4 07	3 52	52	20 36	45	
19	106	53.2		52.2	98	04.5	35.4	50	1 58	3 02	3 45	23	52	21 05	43	
20	121	53.0		52.4	112	33.5	34.9	52	1 33	2 47	35	3 09	52	19	42	
21	136	52.7		52.7	127	02.4	34.2	54	0 55	30	23	2 53	51	36	40	
22	151	52.4		52.9	141	31.4	33.4	56	** **	2 09	3 09	34	51	21 55	39	
23	166	52.1		53.1	156	00.4	32.4	58	** **	1 42	2 54	2 10	51	22 20	35	
24	181	51.8	-22	53.4	170	29.4	-27	60 S	** **	1 01	2 34	1 38	50	22 52	31	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 45.9 ^m		Mag: -4.8 PMG: 8 ^h 56 ^m		Mag: +0.3 PMG: 5 ^h 18 ^m		Mag: -2.3 PMG: 4 ^h 46 ^m		Mag: +0.6 PMG: 19 ^h 19 ^m	
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	77	45.3	225	58.6	-10	22.0	288	15.1	+13	17.8
1	92	47.7	240	59.3		22.4	303	17.5		17.8
2	107	50.2	255	59.9		22.8	318	19.9		17.8
3	122	52.7	271	00.5		23.2	333	22.3		17.8
4	137	55.1	286	01.2		23.6	348	24.8		17.8
5	152	57.6	301	01.8	-10	24.0	3	27.2	+13	17.8
6	168	00.1	316	02.5	-10	24.4	18	29.6	+13	17.8
7	183	02.5	331	03.1		24.8	33	32.1		17.8
8	198	05.0	346	03.7		25.2	48	34.5		17.8
9	213	07.5	1	04.4		25.6	63	36.9		17.8
10	228	09.9	16	05.0		26.0	78	39.4		17.8
11	243	12.4	31	05.6	-10	26.4	93	41.8	+13	17.8
12	258	14.8	46	06.2	-10	26.8	108	44.2	+13	17.8
13	273	17.3	61	06.9		27.2	123	46.7		17.8
14	288	19.8	76	07.5		27.6	138	49.1		17.8
15	303	22.2	91	08.1		28.0	153	51.5		17.8
16	318	24.7	106	08.7		28.5	168	54.0		17.8
17	333	27.2	121	09.4	-10	28.9	183	56.4	+13	17.8
18	348	29.6	136	10.0	-10	29.3	198	58.8	+13	17.8
19	3	32.1	151	10.6		29.7	214	01.3		17.8
20	18	34.6	166	11.2		30.1	229	03.7		17.8
21	33	37.0	181	11.8		30.5	244	06.1		17.8
22	48	39.5	196	12.4		30.9	259	08.6		17.8
23	63	42.0	211	13.0		31.4	274	11.0		17.8
24	78	44.4	226	13.6	-10	31.8	289	13.4	+13	17.8
Dif	—		+6		-4		+17		-2	
							+24		0	
									+25	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna				
	SD: 16/2 PMG: 11 ^h 52.8 ^m				Edad: 30.7 ^d SD: 14/7 PMG: 13 ^h 05 ^m						PHE { 4 ^h : 54/0 12 ^h : 54/0 20 ^h : 54/0 R°: 51 ^m										
	hG ☉	Dec			hG ☾	Dif								Civil	Náutico	Hora	R°	Hora	R°		
h	°	/	°	/	°	/	°	/	°	h	m	h	m	h	m	m	h	m	m		
0	181	51.8	-22	53.4	170	29.4	-27	31.3	12	60 N	14 55	15 51	16 47	11 14	21		15 00	84			
1	196	51.5		53.6	184	58.5		30.1	14	58	15 11	16 02	16 55	10 43	28		31	77			
2	211	51.3		53.8	199	27.5		28.7	15	56	26	12	17 01	19 32		15 54	73				
3	226	51.0		54.0	213	56.6		27.2	15	54	38	21	07	10 00	35		16 13	70			
4	241	50.7		54.3	228	25.7		25.6	16	52	49	29	12	9 44	37		29	68			
5	256	50.4	-22	54.5	242	54.9	-27	23.8	18	50	15 58	16 36	17 18	9 30	39		16 43	66			
6	271	50.1	-22	54.7	257	24.0		21.9	19	45	16 18	16 52	17 29	9 01	42		17 11	63			
7	286	49.8		55.0	271	53.2		19.9	20	40	35	17 05	39	8 39	44		33	61			
8	301	49.6		55.2	286	22.4		17.7	22	35	16 48	17	48	20	46		17 51	59			
9	316	49.3		55.4	300	51.6		15.4	23	30	17 01	27	17 57	8 04	47		18 07	57			
10	331	49.0		55.6	315	20.9		13.0	24	20	21	17 45	18 13	7 37	49		33	55			
11	346	48.7	-22	55.8	329	50.2		10.4	26	10 N	17 39	18 02	18 28	7 14	51		18 56	53			
12	1	48.4	-22	56.1	344	19.5		07.8	26	0	17 57	18 19	18 45	6 53	51		19 17	51			
13	16	48.1		56.3	358	48.9		05.0	30	10 S	18 14	37	19 04	31	53		19 38	49			
14	31	47.8		56.5	13	18.3		02.0	30	20	32	18 57	26	6 08	54		20 01	46			
15	46	47.6		56.7	27	47.7		59.0	30	30	18 54	19 21	19 54	5 41	56		27	44			
16	61	47.3		56.9	42	17.1		55.8	32	35	19 07	36	20 13	25	57		20 42	43			
17	76	47.0	-22	57.2	56	46.6		52.4	34	40	19 21	19 54	20 35	5 06	59		21 00	40			
18	91	46.7	-22	57.4	71	16.2		49.0	34	45	19 39	20 16	21 05	4 44	60		21 21	38			
19	106	46.4		57.6	85	45.7		45.4	36	50	20 01	45	21 49	15	62		21 48	34			
20	121	46.1		57.8	100	15.4		41.7	37	52	11	20 59	22 15	4 01	64		22 01	33			
21	136	45.8		58.0	114	45.0		37.9	38	54	23	21 17	22 55	3 44	66		16	30			
22	151	45.6		58.2	129	14.7		33.9	40	56	37	21 38	** **	25	67		34	27			
23	166	45.3		58.4	143	44.4		29.8	41	58	20 53	22 06	** **	3 01	70		22 55	23			
24	181	45.0	-22	58.6	158	14.2		25.6	42	60 S	21 13	22 49	** **	2 28	76		23 23	15			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 18 ^h 42.0 ^m			Mag: -4.8 PMG: 8 ^h 55 ^m			Mag: +0.3 PMG: 5 ^h 16 ^m			Mag: -2.3 PMG: 4 ^h 42 ^m			Mag: +0.7 PMG: 19 ^h 15 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	/	°	/	°	/	°	/	°	h	/	°	/	°	/						
0	78	44.4	226	13.6	-10	31.8	280	55.5	+12	03.4	289	13.4	+13	17.8	70	27.0	+0	48.2			
1	93	46.9	241	14.3		32.2	295	57.2		03.2	304	15.9		17.8	85	29.5		48.2			
2	108	49.3	256	14.9		32.6	310	58.9		03.0	319	18.3		17.8	100	31.9		48.2			
3	123	51.8	271	15.5		33.0	326	00.6		02.8	334	20.8		17.8	115	34.4		48.2			
4	138	54.3	286	16.1		33.5	341	02.3		02.6	349	23.2		17.8	130	36.9		48.2			
5	153	56.7	301	16.7	-10	33.9	356	04.0	+12	02.3	4	25.6	+13	17.8	145	39.3	+0	48.2			
6	168	59.2	316	17.3	-10	34.3	11	05.7	+12	02.1	19	28.1	+13	17.8	160	41.8	+0	48.3			
7	184	01.7	331	17.9		34.7	26	07.4		01.9	34	30.5		17.8	175	44.3		48.3			
8	199	04.1	346	18.4		35.2	41	09.1		01.7	49	32.9		17.8	190	46.8		48.3			
9	214	06.6	1	19.0		35.6	56	10.8		01.5	64	35.4		17.8	205	49.2		48.3			
10	229	09.1	16	19.6		36.0	71	12.5		01.3	79	37.8		17.8	220	51.7		48.3			
11	244	11.5	31	20.2	-10	36.4	86	14.2	+12	01.0	94	40.3	+13	17.8	235	54.2	+0	48.3			
12	259	14.0	46	20.8	-10	36.9	101	15.9	+12	00.8	109	42.7	+13	17.8	250	56.6	+0	48.3			
13	274	16.5	61	21.4		37.3	116	17.6		00.6	124	45.1		17.8	265	59.1		48.3			
14	289	18.9	76	22.0		37.7	131	19.3		00.4	139	47.6		17.8	281	01.6		48.3			
15	304	21.4	91	22.6		38.2	146	21.0	+12	00.2	154	50.0		17.8	296	04.1		48.3			
16	319	23.8	106	23.1		38.6	161	22.7	+12	00.0	169	52.5		17.8	311	06.5		48.3			
17	334	26.3	121	23.7	-10	39.0	176	24.4	+11	59.7	184	54.9	+13	17.8	326	09.0	+0	48.3			
18	349	28.8	136	24.3	-10	39.5	191	26.1	+11	59.5	199	57.4	+13	17.9	341	11.5	+0	48.4			
19	4	31.2	151	24.9		39.9	206	27.8		59.3	214	59.8		17.9	356	13.9		48.4			
20	19	33.7	166	25.5		40.3	221	29.6		59.1	230	02.2		17.9	11	16.4		48.4			
21	34	36.2	181	26.0		40.8	236	31.3		58.9	245	04.7		17.9	26	18.9		48.4			
22	49	38.6	196	26.6		41.2	251	33.0		58.7	260	07.1		17.9	41	21.3		48.4			
23	64	41.1	211	27.2		41.6	266	34.7		58.5	275	09.6		17.9	56	23.8		48.4			
24	79	43.6	226	27.7	-10	42.1	281	36.4	+11	58.2	290	12.0	+13	17.9	71	26.3	+0	48.4			
Dif	—			+6			-4			+17			-2			+24			0		

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 53.2 ^m				Edad: 2.0 ^d SD: 14/7 PMG: 13 ^h 55 ^m															
					PHE { 4 ^h : 54/0 12 ^h : 54/0 20 ^h : 54/0 Rº: 47 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	181	45.0	-22	58.6	158	14.2	-26	25.6	60	N	6	59	7	55	8	52	11	34	9	
1	196	44.7		58.9	172	44.1		21.3	58		52		44		35	11	10	15		
2	211	44.4		59.1	187	13.9		16.8	56		45		34		21	10	50	20		
3	226	44.1		59.3	201	43.8		12.3	54		39		25	8	09	34	23	22		
4	241	43.8		59.5	216	13.8		07.6	52		34		17	7	58	20	26	36		
5	256	43.6	-22	59.7	230	43.8	-26	02.8	50		6	29	7	10	7	48	10	07		
6	271	43.3	-22	59.9	245	13.9	-25	57.8	45		6	17	6	54	7	28	9	42		
7	286	43.0	-23	00.1	259	44.0		52.8	40		6	07	41	7	12	21	36			
8	301	42.7		00.3	274	14.1		47.6	35		5	58	30	6	58	9	04	38		
9	316	42.4		00.5	288	44.3		42.3	30		50		19	46	8	50	40	19		
10	331	42.1		00.7	303	14.6		36.9	20		33	6	01	25	25	43		27		
11	346	41.8	-23	00.9	317	44.9	-25	31.3	10	N	5	18	5	44	6	07	8	03		
12	1	41.5	-23	01.1	332	15.2	-25	25.7	0		5	01	5	27	5	49	7	43		
13	16	41.2		01.3	346	45.6		19.9	10	S	4	42	5	09	32	23	50	26		
14	31	41.0		01.5	1	16.1		14.1	20		4	20	4	49	5	14	7	01		
15	46	40.7		01.7	15	46.6		08.1	30		3	52	25	4	52	6	36	56		
16	61	40.4		01.9	30	17.2	-25	01.9	35		33	4	10	39	21	58		23		
17	76	40.1	-23	02.1	44	47.8	-24	55.7	40		3	11	3	52	4	25	6	03		
18	91	39.8	-23	02.3	59	18.5	-24	49.4	45		2	41	3	30	4	07	5	42		
19	106	39.5		02.5	73	49.2		42.9	50		1	57	3	01	3	45	16	67		
20	121	39.2		02.7	88	20.0		36.4	52		1	31	2	46	34	5	03	70		
21	136	38.9		02.9	102	50.8		29.7	54		0	51	29	22	4	48	72	45		
22	151	38.6		03.1	117	21.7		22.9	56		**	**	2	08	3	09	31	75		
23	166	38.3		03.3	131	52.7		16.0	58		**	**	1	40	2	53	4	10		
24	181	38.1	-23	03.5	146	23.7	-24	09.0	60	S	**	**	0	57	2	33	3	43		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 38.0 ^m		Mag: -4.8 PMG: 8 ^h 54 ^m		Mag: +0.3 PMG: 5 ^h 13 ^m		Mag: -2.3 PMG: 4 ^h 38 ^m		Mag: +0.7 PMG: 19 ^h 11 ^m	
	hG ♂		hG ♀		hG ♂		hG ♀		hG ♀	
h	°	'	°	'	°	'	°	'	°	'
0	79	43.6	226	27.7	-10	42.1	281	36.4	+11	58.2
1	94	46.0	241	28.3		42.5	296	38.1		58.0
2	109	48.5	256	28.9		43.0	311	39.8		57.8
3	124	50.9	271	29.4		43.4	326	41.5		57.6
4	139	53.4	286	30.0		43.8	341	43.2		57.4
5	154	55.9	301	30.6	-10	44.3	356	45.0	+11	57.2
6	169	58.3	316	31.1	-10	44.7	11	46.7	+11	57.0
7	185	00.8	331	31.7		45.2	26	48.4		56.8
8	200	03.3	346	32.2		45.6	41	50.1		56.6
9	215	05.7	1	32.8		46.1	56	51.8		56.3
10	230	08.2	16	33.3		46.5	71	53.6		56.1
11	245	10.7	31	33.9	-10	47.0	86	55.3	+11	55.9
12	260	13.1	46	34.5	-10	47.4	101	57.0	+11	55.7
13	275	15.6	61	35.0		47.9	116	58.7		55.5
14	290	18.1	76	35.5		48.3	132	00.4		55.3
15	305	20.5	91	36.1		48.8	147	02.2		55.1
16	320	23.0	106	36.6		49.2	162	03.9		54.9
17	335	25.4	121	37.2	-10	49.7	177	05.6	+11	54.7
18	350	27.9	136	37.7	-10	50.1	192	07.3	+11	54.5
19	5	30.4	151	38.3		50.6	207	09.1		54.3
20	20	32.8	166	38.8		51.0	222	10.8		54.1
21	35	35.3	181	39.3		51.5	237	12.5		53.8
22	50	37.8	196	39.9		51.9	252	14.2		53.6
23	65	40.2	211	40.4		52.4	267	16.0		53.4
24	80	42.7	226	40.9	-10	52.8	282	17.7	+11	53.2
Dif	—		+5		-4		+17		-2	

+24		0		+25	
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UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 16 ^h /2 PMG: 11 ^h 53.7 ^m			Edad: 3.0 ^d PHE { 4 ^h : 54 ^h /0 12 ^h : 54 ^h /0 20 ^h : 54 ^h /1 Rº: 47 ^m							Civil			Náutico			Hora Rº		Hora Rº	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif													
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m			
0	181	38.1	-23	03.5	146	23.7	-24	09.0	71	60 N	14 54	15 51	16 47	11 43	6	17 52	90			
1	196	37.8		03.7	160	54.7	-24	01.9	72	58	15 11	16 02	16 54	25	11	18 09	85			
2	211	37.5		03.8	175	25.9	-23	54.7	73	56	25	12	17 01	11 10	15	24	81			
3	226	37.2		04.0	189	57.0		47.4	74	54	37	21	07	10 57	18	36	78			
4	241	36.9		04.2	204	28.3		40.0	74	52	48	29	13	46	21	47	75			
5	256	36.6	-23	04.4	218	59.6	-23	32.4	76	50	15 58	16 36	17 18	10 36	23	18 57	72			
6	271	36.3	-23	04.6	233	30.9	-23	24.8	76	45	16 18	16 52	17 29	10 14	28	19 17	67			
7	286	36.0		04.8	248	02.3		17.1	77	40	35	17 05	39	9 57	31	34	63			
8	301	35.7		05.0	262	33.8		09.2	79	35	16 49	17	49	42	35	47	61			
9	316	35.4		05.2	277	05.3	-23	01.3	79	30	17 01	27	17 57	30	36	19 59	58			
10	331	35.1		05.3	291	36.9	-22	53.2	81	20	22	17 46	18 13	9 08	40	20 20	53			
11	346	34.8	-23	05.5	306	08.6	-22	45.1	81	10 N	17 40	18 03	18 29	8 49	44	20 37	50			
12	1	34.6	-23	05.7	320	40.3	-22	36.9	82	0	17 57	18 20	18 46	8 31	47	20 54	46			
13	16	34.3		05.9	335	12.0		28.5	84	10 S	18 15	38	19 05	8 13	51	21 10	42			
14	31	34.0		06.1	349	43.9		20.1	86	20	33	18 58	27	7 54	54	27	39			
15	46	33.7		06.3	4	15.7		11.5	86	30	18 55	19 23	19 56	32	58	47	34			
16	61	33.4		06.4	18	47.7	-22	02.9	86	35	19 08	38	20 14	19	60	21 58	32			
17	76	33.1	-23	06.6	33	19.7	-21	54.2	87	40	19 23	19 56	20 37	7 04	63	22 11	29			
18	91	32.8	-23	06.8	47	51.7	-21	45.3	89	45	19 41	20 18	21 07	6 46	67	22 27	25			
19	106	32.5		07.0	62	23.8		36.4	89	50	20 03	20 47	21 51	23	72	46	21			
20	121	32.2		07.1	76	56.0		27.4	90	52	13	21 02	22 18	13	74	22 55	18			
21	136	31.9		07.3	91	28.2		18.3	91	54	26	19	23 00	6 00	77	23 05	15			
22	151	31.6		07.5	106	00.5	-21	09.1	92	56	39	21 41	** **	5 46	81	16	13			
23	166	31.3		07.7	120	32.8	-20	59.8	93	58	20 56	22 09	** **	30	85	29	9			
24	181	31.0	-23	07.8	135	05.2	-20	50.4	94	60 S	21 16	22 55	** **	5 10	90	23 44	4			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO											
	PMG 18 ^h 34.1 ^m		Mag: -4.8 PMG: 8 ^h 53 ^m		Mag: +0.3 PMG: 5 ^h 10 ^m		Mag: -2.3 PMG: 4 ^h 35 ^m		Mag: +0.7 PMG: 19 ^h 07 ^m											
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec										
h	°	'	°	'	°	'	°	'	°	'										
0	80	42.7	226	40.9	-10	52.8	282	17.7	+11	53.2										
1	95	45.2	241	41.5		53.3	297	19.4		53.0										
2	110	47.6	256	42.0		53.7	312	21.2		52.8										
3	125	50.1	271	42.5		54.2	327	22.9		52.6										
4	140	52.6	286	43.0		54.7	342	24.6		52.4										
5	155	55.0	301	43.6	-10	55.1	357	26.4	+11	52.2										
6	170	57.5	316	44.1	-10	55.6	12	28.1	+11	52.0										
7	185	59.9	331	44.6		56.0	27	29.8		51.8										
8	201	02.4	346	45.1		56.5	42	31.6		51.6										
9	216	04.9	1	45.7		57.0	57	33.3		51.4										
10	231	07.3	16	46.2		57.4	72	35.0		51.2										
11	246	09.8	31	46.7	-10	57.9	87	36.8	+11	51.0										
12	261	12.3	46	47.2	-10	58.4	102	38.5	+11	50.8										
13	276	14.7	61	47.7		58.8	117	40.3		50.6										
14	291	17.2	76	48.2		59.3	132	42.0		50.4										
15	306	19.7	91	48.7	-10	59.8	147	43.7		50.2										
16	321	22.1	106	49.2	-11	00.2	162	45.5		50.0										
17	336	24.6	121	49.7	-11	00.7	177	47.2	+11	49.8										
18	351	27.1	136	50.2	-11	01.2	192	49.0	+11	49.6										
19	6	29.5	151	50.8		01.6	207	50.7		49.4										
20	21	32.0	166	51.3		02.1	222	52.5		49.2										
21	36	34.4	181	51.8		02.6	237	54.2		49.0										
22	51	36.9	196	52.3		03.1	252	55.9		48.8										
23	66	39.4	211	52.7		03.5	267	57.7		48.6										
24	81	41.8	226	53.2	-11	04.0	282	59.4	+11	48.4										
Dif	—		+5		-5		+17		-2											

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 54.2 ^m			Edad: 4.0 ^d PHE { 4 ^h : 54/1 12 ^h : 54/2 20 ^h : 54/3 Rº: 43 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	h	m
0	181	31.0	-23	07.8	135	05.2	-20	50.4	94	60 N	7 01	7 58	8 55	11 47	2	19 21	87	
1	196	30.7		08.0	149	37.7		41.0	96	58	6 54	46	38	35	6	33	82	
2	211	30.4		08.2	164	10.2		31.4	96	56	47	36	23	24	9	43	79	
3	226	30.2		08.3	178	42.7		21.8	96	54	41	27	11	14	12	19	52	
4	241	29.9		08.5	193	15.4		12.0	98	52	36	19	8 00	11 05	15	20 00	73	
5	256	29.6	-23	08.7	207	48.0	-20	02.2	98	50	6 30	7 12	7 50	10 57	18	20 08	70	
6	271	29.3	-23	08.9	222	20.8	-19	52.3	99	45	6 19	6 56	7 30	10 41	22	20 23	66	
7	286	29.0		09.0	236	53.5		42.3	100	40	6 09	43	7 13	27	26	36	61	
8	301	28.7		09.2	251	26.4		32.3	100	35	5 59	31	6 59	15	29	46	59	
9	316	28.4		09.4	265	59.3		22.1	102	30	51	21	47	10 05	31	20 56	55	
10	331	28.1		09.5	280	32.2		11.9	102	20	35	6 02	26	9 47	36	21 12	50	
11	346	27.8	-23	09.7	295	05.2	-19	01.5	104	10 N	5 19	5 45	6 08	9 32	39	21 25	47	
12	1	27.5	-23	09.8	309	38.3	-18	51.1	104	0	5 02	5 28	5 50	9 17	44	21 38	43	
13	16	27.2		10.0	324	11.4		40.7	106	10 S	4 43	5 10	33	9 02	48	21 51	39	
14	31	26.9		10.2	338	44.5		30.1	106	20	4 21	4 50	5 14	8 47	51	22 05	34	
15	46	26.6		10.3	353	17.7		19.4	107	30	3 52	25	4 53	28	56	20	30	
16	61	26.3		10.5	7	51.0	-18	08.7	107	35	34	4 10	40	18	59	29	27	
17	76	26.0	-23	10.7	22	24.3	-17	57.9	108	40	3 11	3 52	4 25	8 06	62	22 39	24	
18	91	25.7	-23	10.8	36	57.6	-17	47.1	108	45	2 41	3 30	4 07	7 51	66	22 51	20	
19	106	25.4		11.0	51	31.0		36.1	110	50	1 56	3 01	3 45	34	70	23 05	16	
20	121	25.1		11.1	66	04.5		25.1	110	52	1 30	2 46	34	25	73	12	13	
21	136	24.8		11.3	80	38.0		14.0	111	54	0 48	28	22	16	76	19	11	
22	151	24.5		11.4	95	11.5	-17	02.8	112	56	** **	2 07	3 08	7 05	79	27	9	
23	166	24.2		11.6	109	45.1	-16	51.6	112	58	** **	1 38	2 52	6 53	83	36	6	
24	181	23.9	-23	11.7	124	18.8	-16	40.3	113	60 S	** **	0 53	2 32	6 39	87	23 47	1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 30.2 ^m		Mag: -4.8 PMG: 8 ^h 52 ^m		Mag: +0.3 PMG: 5 ^h 07 ^m		Mag: -2.3 PMG: 4 ^h 31 ^m		Mag: +0.7 PMG: 19 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	81	41.8	226	53.2	-11	04.0	282	59.4	+11	48.4
1	96	44.3	241	53.7		04.5	298	01.2		48.2
2	111	46.8	256	54.2		05.0	313	02.9		48.0
3	126	49.2	271	54.7		05.4	328	04.7		47.8
4	141	51.7	286	55.2		05.9	343	06.4		47.6
5	156	54.2	301	55.7	-11	06.4	358	08.2	+11	47.4
6	171	56.6	316	56.2	-11	06.9	13	09.9	+11	47.2
7	186	59.1	331	56.7		07.3	28	11.7		47.0
8	202	01.6	346	57.2		07.8	43	13.5		46.8
9	217	04.0	1	57.6		08.3	58	15.2		46.6
10	232	06.5	16	58.1		08.8	73	17.0		46.4
11	247	08.9	31	58.6	-11	09.3	88	18.7	+11	46.2
12	262	11.4	46	59.1	-11	09.7	103	20.5	+11	46.0
13	277	13.9	61	59.6		10.2	118	22.2		45.8
14	292	16.3	77	00.0		10.7	133	24.0		45.6
15	307	18.8	92	00.5		11.2	148	25.7		45.4
16	322	21.3	107	01.0		11.7	163	27.5		45.2
17	337	23.7	122	01.4	-11	12.2	178	29.3	+11	45.0
18	352	26.2	137	01.9	-11	12.6	193	31.0	+11	44.8
19	7	28.7	152	02.4		13.1	208	32.8		44.7
20	22	31.1	167	02.9		13.6	223	34.6		44.5
21	37	33.6	182	03.3		14.1	238	36.3		44.3
22	52	36.0	197	03.8		14.6	253	38.1		44.1
23	67	38.5	212	04.2		15.1	268	39.9		43.9
24	82	41.0	227	04.7	-11	15.6	283	41.6	+11	43.7
Dif	—		+5		-5		+18		-2	
							+25		0	
									+25	

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 54.6 ^m				Edad: 5.0 ^d SD: 14'8 PMG: 16 ^h 11 ^m PHE { 4 ^h : 54'4 12 ^h : 54'6 20 ^h : 54'7 Rº: 43 ^m														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	Rº	Hora	Rº					
h	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	h m	h m	h m	h m	h m			
0	181	23.9	-23	11.7	124	18.8	-16	40.3	60 N	14 53	15 50	16 47	11 49	3	20 48	86			
1	196	23.6		11.9	138	52.4		28.9	58	15 10	16 02	16 54	41	6	20 55	83			
2	211	23.3		12.0	153	26.2		17.4	56	25	12	17 01	33	9	21 02	80			
3	226	23.0		12.2	167	59.9	-16	05.9	54	37	21	07	26	12	08	77			
4	241	22.7		12.3	182	33.7	-15	54.3	52	48	29	13	20	14	13	75			
5	256	22.5	-23	12.5	197	07.6	-15	42.6	50	15 58	16 37	17 18	11 15	16	21 18	72			
6	271	22.2	-23	12.6	211	41.5	-15	30.9	45	16 19	16 52	17 30	11 03	20	21 29	67			
7	286	21.9		12.8	226	15.4		19.1	40	35	17 06	40	10 53	24	37	63			
8	301	21.6		12.9	240	49.4	-15	07.2	35	16 49	18	49	44	27	45	59			
9	316	21.3		13.1	255	23.4	-14	55.3	30	17 02	28	17 58	36	31	21 51	57			
10	331	21.0		13.2	269	57.5		43.3	20	23	17 47	18 14	23 35	22 02	52				
11	346	20.7	-23	13.4	284	31.6	-14	31.2	10 N	17 41	18 04	18 30	10 11	40	22 12	47			
12	1	20.4	-23	13.5	299	05.7	-14	19.1	0	17 58	18 21	18 47	10 01	43	22 21	43			
13	16	20.1		13.7	313	39.9	-14	06.9	10 S	18 16	39	19 06	9 50	47	30	39			
14	31	19.8		13.8	328	14.1	-13	54.7	20	35	18 59	28	38	52	39	35			
15	46	19.5		14.0	342	48.3		42.3	30	18 57	19 24	19 57	24	57	50	30			
16	61	19.2		14.1	357	22.6		30.0	35	19 09	39	20 16	17	59	22 56	27			
17	76	18.9	-23	14.2	11	56.9	-13	17.5	40	19 24	19 57	20 39	9 08	63	23 03	24			
18	91	18.6	-23	14.4	26	31.2	-13	05.1	45	19 42	20 20	21 09	8 57	67	23 11	20			
19	106	18.3		14.5	41	05.6	-12	52.5	50	20 05	20 49	21 54	44	72	21	15			
20	121	18.0		14.6	55	39.9		39.9	52	15	21 04	22 21	38	75	25	13			
21	136	17.7		14.8	70	14.4		27.2	54	28	22	23 05	32	77	30	11			
22	151	17.4		14.9	84	48.8		14.5	56	42	21 44	** **	24	80	36	8			
23	166	17.1		15.1	99	23.3	-12	01.7	58	20 58	22 13	** **	16	83	42	5			
24	181	16.8	-23	15.2	113	57.8	-11	48.9	60 S	21 18	23 00	** **	8 06	87	23 48	2			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 18 ^h 26.2 ^m		Mag: -4.8 PMG: 8 ^h 51 ^m		Mag: +0.2 PMG: 5 ^h 05 ^m		Mag: -2.3 PMG: 4 ^h 27 ^m		Mag: +0.7 PMG: 18 ^h 59 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /					
0	82	41.0	227	04.7	-11	15.6	283	41.6	+11	43.7					
1	97	43.4	242	05.2		16.1	298	43.4		43.5					
2	112	45.9	257	05.6		16.5	313	45.2		43.3					
3	127	48.4	272	06.1		17.0	328	46.9		43.1					
4	142	50.8	287	06.5		17.5	343	48.7		42.9					
5	157	53.3	302	07.0	-11	18.0	358	50.5	+11	42.7					
6	172	55.8	317	07.4	-11	18.5	13	52.2	+11	42.5					
7	187	58.2	332	07.9		19.0	28	54.0		42.4					
8	203	00.7	347	08.3		19.5	43	55.8		42.2					
9	218	03.2	2	08.8		20.0	58	57.5		42.0					
10	233	05.6	17	09.2		20.5	73	59.3		41.8					
11	248	08.1	32	09.7	-11	21.0	89	01.1	+11	41.6					
12	263	10.5	47	10.1	-11	21.5	104	02.9	+11	41.4					
13	278	13.0	62	10.6		22.0	119	04.6		41.2					
14	293	15.5	77	11.0		22.5	134	06.4		41.0					
15	308	17.9	92	11.4		23.0	149	08.2		40.9					
16	323	20.4	107	11.9		23.5	164	10.0		40.7					
17	338	22.9	122	12.3	-11	24.0	179	11.8	+11	40.5					
18	353	25.3	137	12.8	-11	24.5	194	13.5	+11	40.3					
19	8	27.8	152	13.2		25.0	209	15.3		40.1					
20	23	30.3	167	13.6		25.5	224	17.1		39.9					
21	38	32.7	182	14.1		26.0	239	18.9		39.7					
22	53	35.2	197	14.5		26.5	254	20.7		39.6					
23	68	37.7	212	14.9		27.0	269	22.5		39.4					
24	83	40.1	227	15.3	-11	27.5	284	24.2	+11	39.2					
Dif	—		+4		-5		+18		-2		+25	0	+25		0

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 55.1 ^m				Edad: 6.0 ^d PHE { 4 ^h : 54/9 12 ^h : 55/0 20 ^h : 55/2 PMG: 16 ^h 53 ^m Rº: 41 ^m														
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	181	16.8	-23	15.2	113	57.8	-11	48.9	129	60 N	7 03	8 00	8 57	11 50	1	22	13	85	
1	196	16.5		15.3	128	32.3		36.0	129	58	6 56	7 48	40	45	4	17	81		
2	211	16.2		15.5	143	06.9		23.1	130	56	49	38	25	41	6	20	79		
3	226	15.9		15.6	157	41.5	-11	10.1	130	54	43	29	13	36	9	23	76		
4	241	15.6		15.7	172	16.1	-10	57.1	130	52	37	21	8 02	33	11	26	74		
5	256	15.3	-23	15.8	186	50.7	-10	44.0	131	50	6 32	7 13	7 52	11 29	13	22	29	71	
6	271	15.0	-23	16.0	201	25.3	-10	30.8	132	45	6 20	6 57	7 31	11 22	18	22	34	67	
7	286	14.7		16.1	216	00.0		17.6	132	40	10	44	15	15	22	39	62		
8	301	14.4		16.2	230	34.7	-10	04.4	132	35	6 01	32	7 00	10	25	43	59		
9	316	14.1		16.4	245	09.4	-9	51.1	133	30	5 52	22	6 48	11 05	28	46	56		
10	331	13.8		16.5	259	44.1		37.8	133	20	36	6 03	27	10 57	33	52	51		
11	346	13.5	-23	16.6	274	18.8	-9	24.4	134	10 N	5 20	5 46	6 09	10 50	37	22	58	46	
12	1	13.2	-23	16.7	288	53.6	-9	10.9	135	0	5 03	5 29	5 51	10 43	41	23	03	41	
13	16	12.9		16.9	303	28.3	-8	57.5	134	10 S	4 44	5 11	34	36	45	07	38		
14	31	12.6		17.0	318	03.1		43.9	136	20	4 21	4 51	5 15	28	51	12	33		
15	46	12.3		17.1	332	37.9		30.4	135	30	3 52	26	4 53	20	55	18	28		
16	61	12.0		17.2	347	12.7		16.8	136	35	34	4 11	40	15	58	22	24		
17	76	11.7	-23	17.3	1	47.5	-8	03.1	137	40	3 11	3 53	4 25	10 09	62	23	25	22	
18	91	11.4	-23	17.5	16	22.3	-7	49.4	137	45	2 41	3 30	4 07	10 03	66	23	30	17	
19	106	11.0		17.6	30	57.1		35.7	137	50	1 56	3 01	3 45	9 55	71	35	13		
20	121	10.7		17.7	45	31.9		21.9	138	52	1 29	2 46	34	51	73	37	11		
21	136	10.4		17.8	60	06.7	-7	08.1	138	54	0 45	28	22	47	76	39	9		
22	151	10.1		17.9	74	41.6	-6	54.2	139	56	** **	2 06	3 08	43	78	42	6		
23	166	09.8		18.1	89	16.4		40.3	139	58	** **	1 37	2 51	38	81	45	4		
24	181	09.5	-23	18.2	103	51.2	-6	26.4	139	60 S	** **	0 49	2 31	9 32	85	23	49	0	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 22.3 ^m		Mag: -4.7 PMG: 8 ^h 51 ^m		Mag: +0.2 PMG: 5 ^h 02 ^m		Mag: -2.3 PMG: 4 ^h 23 ^m		Mag: +0.7 PMG: 18 ^h 55 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	83	40.1	227	15.3	-11	27.5	284	24.2	+11	39.2
1	98	42.6	242	15.8		28.0	299	26.0		39.0
2	113	45.0	257	16.2		28.5	314	27.8		38.8
3	128	47.5	272	16.6		29.0	329	29.6		38.6
4	143	50.0	287	17.0		29.5	344	31.4		38.5
5	158	52.4	302	17.4	-11	30.0	359	33.2	+11	38.3
6	173	54.9	317	17.9	-11	30.5	14	35.0	+11	38.1
7	188	57.4	332	18.3		31.0	29	36.8		37.9
8	203	59.8	347	18.7		31.5	44	38.5		37.7
9	219	02.3	2	19.1		32.1	59	40.3		37.5
10	234	04.8	17	19.5		32.6	74	42.1		37.4
11	249	07.2	32	19.9	-11	33.1	89	43.9	+11	37.2
12	264	09.7	47	20.3	-11	33.6	104	45.7	+11	37.0
13	279	12.1	62	20.8		34.1	119	47.5		36.8
14	294	14.6	77	21.2		34.6	134	49.3		36.6
15	309	17.1	92	21.6		35.1	149	51.1		36.5
16	324	19.5	107	22.0		35.6	164	52.9		36.3
17	339	22.0	122	22.4	-11	36.1	179	54.7	+11	36.1
18	354	24.5	137	22.8	-11	36.7	194	56.5	+11	35.9
19	9	26.9	152	23.2		37.2	209	58.3		35.7
20	24	29.4	167	23.6		37.7	225	00.1		35.6
21	39	31.9	182	24.0		38.2	240	01.9		35.4
22	54	34.3	197	24.4		38.7	255	03.7		35.2
23	69	36.8	212	24.8		39.2	270	05.5		35.0
24	84	39.3	227	25.2	-11	39.8	285	07.3	+11	34.9
Dif	—		+4		-5		+18		-2	
							+25		0	
									+24	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna			Puesta de Luna						
	SD: 16/2 PMG: 11 ^h 55.6 ^m				Edad: 7.0 ^d SD: 15/1 PMG: 17 ^h 34 ^m PHE { 4 ^h : 55/4 12 ^h : 55/7 20 ^h : 55/9 Rº: 44 ^m																			
	hG ☉	Dec			hG ☾	Dif			Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº						
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m			
0	181	09.5	-23	18.2	103	51.2		-6	26.4	140	60 N	14	53	15	51	16	47	11	51	1	23	38	89	
1	196	09.2		18.3	118	26.1	159	-6	12.4	140	58	15	10	16	02	16	55		49	4		38	86	
2	211	08.9		18.4	133	00.9	158	-5	58.4	140	56		25	12	17	01		47	7		39	83		
3	226	08.6		18.5	147	35.7	158		44.3	141	54		38	21		08		45	10		39	80		
4	241	08.3		18.6	162	10.6	159		30.2	141	52		49	30		13		44	12		40	77		
5	256	08.0	-23	18.7	176	45.4	158	-5	16.1	141	50	15	58	16	37	17	18	11	42	15	23	40	75	
6	271	07.7	-23	18.8	191	20.2	158	-5	02.0	141	45	16	19	16	53	17	30	11	40	19	23	41	70	
7	286	07.4		19.0	205	55.0	158	-4	47.8	142	40		36	17	06		40		37	23		41	66	
8	301	07.1		19.1	220	29.8	158		33.6	142	35	16	50		18		50		35	26		42	62	
9	316	06.8		19.2	235	04.6	158		19.3	143	30	17	02		29	17	59		33	29		42	59	
10	331	06.5		19.3	249	39.4	158	-4	05.0	143	20		23	17	48	18	15	30	34		43	53		
11	346	06.2	-23	19.4	264	14.2	158	-3	50.7	143	10 N	17	42	18	05	18	31	11	27	39	23	44	48	
12	1	05.9	-23	19.5	278	48.9	157	-3	36.4	143	0	17	59	18	22	18	48	11	24	44	23	44	44	
13	16	05.6		19.6	293	23.7	158		22.0	144	10 S	18	17	18	40	19	07		21	48		45	39	
14	31	05.3		19.7	307	58.4	157	-3	07.6	144	20		36	19	00		30	19	52		45	35		
15	46	05.0		19.8	322	33.1	157	-2	53.2	144	30	18	58	25	19	59		15	58		46	30		
16	61	04.7		19.9	337	07.8	157		38.7	145	35	19	11	40	20	17		13	61		46	27		
17	76	04.4	-23	20.0	351	42.5	157	-2	24.3	144	40	19	26	19	59	20	40	11	11	65	23	47	23	
18	91	04.1	-23	20.1	6	17.2	157	-2	09.8	145	45	19	44	20	21	21	11	11	09	68	23	47	19	
19	106	03.8		20.2	20	51.8	156	-1	55.2	146	50	20	06	20	51	21	56		06	73		48	14	
20	121	03.5		20.3	35	26.4	156		40.7	145	52		17	21	06	22	24		04	76		48	12	
21	136	03.2		20.4	50	01.0	156		26.1	146	54		29	24	23	09		03	78		48	10		
22	151	02.9		20.5	64	35.6	156	-1	11.5	146	56	20	43	21	46	** **		11	01	81		48	8	
23	166	02.6		20.6	79	10.1	155	-0	56.9	146	58	21	00	22	15	** **		10	59	85		49	4	
24	181	02.3	-23	20.7	93	44.7	156	-0	42.3	146	60 S	21	20	23	05	** **		10	57	88	23	49	2	
UT	ARIES PMG 18 ^h 18.4 ^m			VENUS Mag: -4.7 PMG: 8 ^h 50 ^m			MARTE Mag: +0.2 PMG: 4 ^h 59 ^m			JÚPITER Mag: -2.3 PMG: 4 ^h 19 ^m			SATURNO Mag: +0.7 PMG: 18 ^h 52 ^m											
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♎	Dec	hG ♏	Dec	hG ♐	Dec	hG ♑	Dec											
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	84	39.3	227	25.2	-11	39.8	285	07.3	+11	34.9	295	07.7	+13	19.2	76	21.2	+0	50.1						
1	99	41.7	242	25.6		40.3	300	09.1		34.7	310	10.2		19.2	91	23.7		50.1						
2	114	44.2	257	25.9		40.8	315	10.9		34.5	325	12.7		19.2	106	26.1		50.2						
3	129	46.6	272	26.3		41.3	330	12.7		34.3	340	15.2		19.3	121	28.5		50.2						
4	144	49.1	287	26.7		41.8	345	14.5		34.2	355	17.6		19.3	136	31.0		50.2						
5	159	51.6	302	27.1	-11	42.4	0	16.3	+11	34.0	10	20.1	+13	19.3	151	33.4	+0	50.2						
6	174	54.0	317	27.5	-11	42.9	15	18.2	+11	33.8	25	22.6	+13	19.3	166	35.9	+0	50.2						
7	189	56.5	332	27.9		43.4	30	20.0		33.6	40	25.1		19.3	181	38.3		50.3						
8	204	59.0	347	28.3		43.9	45	21.8		33.5	55	27.6		19.4	196	40.8		50.3						
9	220	01.4	2	28.6		44.4	60	23.6		33.3	70	30.1		19.4	211	43.2		50.3						
10	235	03.9	17	29.0		45.0	75	25.4		33.1	85	32.6		19.4	226	45.7		50.3						
11	250	06.4	32	29.4	-11	45.5	90	27.2	+11	32.9	100	35.1	+13	19.4	241	48.1	+0	50.3						
12	265	08.8	47	29.8	-11	46.0	105	29.0	+11	32.8	115	37.5	+13	19.4	256	50.6	+0	50.4						
13	280	11.3	62	30.2		46.5	120	30.8		32.6	130	40.0		19.4	271	53.0		50.4						
14	295	13.8	77	30.5		47.1	135	32.7		32.4	145	42.5		19.5	286	55.4		50.4						
15	310	16.2	92	30.9		47.6	150	34.5		32.3	160	45.0		19.5	301	57.9		50.4						
16	325	18.7	107	31.3		48.1	165	36.3		32.1	175	47.5		19.5	317	00.3		50.4						
17	340	21.1	122	31.6	-11	48.6	180	38.1	+11	31.9	190	50.0	+13	19.5	332	02.8	+0	50.5						
18	355	23.6	137	32.0	-11	49.2	195	39.9	+11	31.7	205	52.5	+13	19.5	347	05.2	+0	50.5						
19	10	26.1	152	32.4		49.7	210	41.7		31.6	220	55.0		19.6	2	07.7		50.5						
20	25	28.5	167	32.7		50.2	225	43.6		31.4	235	57.5		19.6	17	10.1		50.5						
21	40	31.0	182	33.1		50.7	240	45.4		31.2	250	59.9		19.6	32	12.6		50.5						
22	55	33.5	197	33.5		51.3	255	47.2		31.1	266	02.4		19.6	47	15.0		50.6						
23	70	35.9	212	33.8		51.8	270	49.0		30.9	281	04.9		19.7	62	17.4		50.6						
24	85	38.4	227	34.2	-11	52.3	285	50.9	+11	30.7	296	07.4	+13	19.7	77	19.9	+0	50.6						
Dif	—			+4			-5			+18			-2			+25			0			+24		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 11 ^h 56.1 ^m				Edad: 8.0 ^d SD: 15'3 PMG: 18 ^h 17 ^m															
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	181	02.3	-23	20.7	93	44.7	-0	42.3	60 N	7	05	8	01	8	59	11	51	1	** ** *	
1	196	01.9		20.8	108	19.1		27.6	58	6	57	7	50		42		52	4	** ** *	
2	211	01.6		20.9	122	53.6	-0	12.9	56		50		40		27		53	7	** ** *	
3	226	01.3		21.0	137	28.0	+0	01.8	54		44		30		14		54	9	** ** *	
4	241	01.0		21.1	152	02.4		16.5	52		39		22	8	03		55	12	** ** *	
5	256	00.7	-23	21.2	166	36.8	+0	31.2	50		6	33	7	15	7	53	11	56	14	
6	271	00.4	-23	21.2	181	11.1	+0	45.9	45		6	22	6	59	7	33	11	57	19	
7	286	00.1		21.3	195	45.4	+1	00.7	40			11		45	16		11	59	23	
8	300	59.8		21.4	210	19.6		15.4	35		6	02		34	7	02	12	00	26	
9	315	59.5		21.5	224	53.8		30.2	30		5	53		23	6	49		01	29	
10	330	59.2		21.6	239	28.0		45.0	20			37	6	04		28		03	35	
11	345	58.9	-23	21.7	254	02.1	+1	59.8	10 N		5	21		5	47	6	10	12	05	39
12	0	58.6	-23	21.8	268	36.2	+2	14.6	0		5	04		5	30	5	52	12	06	44
13	15	58.3		21.9	283	10.2		29.5	10 S		4	45		5	12		35		08	48
14	30	58.0		21.9	297	44.2		44.3	20		4	22		4	51	5	16	10	53	** ** *
15	45	57.7		22.0	312	18.1	+2	59.1	30		3	53		26	4	54	12	59		** ** *
16	60	57.4		22.1	326	52.0	+3	14.0	35			34		4	11	41		13	62	** ** *
17	75	57.1	-23	22.2	341	25.9	+3	28.8	40		3	11		3	53	4	26	12	14	66
18	90	56.8	-23	22.3	355	59.7	+3	43.7	45		2	41		3	31	4	08	12	16	70
19	105	56.5		22.3	10	33.4	+3	58.6	50		1	56		3	01	3	45	18	75	** ** *
20	120	56.1		22.4	25	07.1	+4	13.4	52		1	28		2	46	35		19	77	23 59 13
21	135	55.8		22.5	39	40.7		28.3	54		0	43		28	22		20	80		57 10
22	150	55.5		22.6	54	14.3		43.1	56	** **	** **	2	06		3	08		21	83	55 7
23	165	55.2		22.7	68	47.8	+4	58.0	58	** **	** **	1	36		2	51		22	87	52 4
24	180	54.9	-23	22.7	83	21.2	+5	12.9	60 S	** **	** **	0	47		2	31	12	23	91	23 49 1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 14.4 ^m		Mag: -4.7 PMG: 8 ^h 50 ^m		Mag: +0.2 PMG: 4 ^h 56 ^m		Mag: -2.3 PMG: 4 ^h 15 ^m		Mag: +0.7 PMG: 18 ^h 48 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	85	38.4	227	34.2	-11	52.3	285	50.9	+11	30.7
1	100	40.9	242	34.6		52.9	300	52.7		30.6
2	115	43.3	257	34.9		53.4	315	54.5		30.4
3	130	45.8	272	35.3		53.9	330	56.3		30.2
4	145	48.2	287	35.6		54.5	345	58.2		30.0
5	160	50.7	302	36.0	-11	55.0	1	00.0	+11	29.9
6	175	53.2	317	36.3	-11	55.5	16	01.8	+11	29.7
7	190	55.6	332	36.7		56.1	31	03.6		29.5
8	205	58.1	347	37.0		56.6	46	05.5		29.4
9	221	00.6	2	37.4		57.1	61	07.3		29.2
10	236	03.0	17	37.7		57.7	76	09.1		29.1
11	251	05.5	32	38.1	-11	58.2	91	11.0	+11	28.9
12	266	08.0	47	38.4	-11	58.7	106	12.8	+11	28.7
13	281	10.4	62	38.8		59.3	121	14.6		28.6
14	296	12.9	77	39.1	-11	59.8	136	16.5		28.4
15	311	15.4	92	39.5	-12	00.3	151	18.3		28.2
16	326	17.8	107	39.8		00.9	166	20.1		28.1
17	341	20.3	122	40.1	-12	01.4	181	22.0	+11	27.9
18	356	22.7	137	40.5	-12	02.0	196	23.8	+11	27.7
19	11	25.2	152	40.8		02.5	211	25.7		27.6
20	26	27.7	167	41.1		03.0	226	27.5		27.4
21	41	30.1	182	41.5		03.6	241	29.3		27.3
22	56	32.6	197	41.8		04.1	256	31.2		27.1
23	71	35.1	212	42.1		04.7	271	33.0		26.9
24	86	37.5	227	42.5	-12	05.2	286	34.9	+11	26.8
Dif	—		+3		-5		+18		-2	
							+25		0	
									+24	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16'3 PMG: 11 ^h 56.6 ^m				Edad: 9.0 ^d SD: 15'5 PMG: 19 ^h 01 ^m								PHE { 4 ^h : 57'0 12 ^h : 57'3 20 ^h : 57'7 Rº: 50 ^m								
	hG ☉	Dec			hG ☾	Dif			Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	180	54.9	-23	22.7	83	21.2			+5	12.9	148	60 N	14 53	15 51	16 48	11 52	2		1 06	94	
1	195	54.6		22.8	97	54.6	144			27.7	148	58	15 11	16 03	16 55	11 56	7		03	90	
2	210	54.3		22.9	112	27.9	143			42.6	149	56	25	13	17 02	12 00	10		1 00	87	
3	225	54.0		23.0	127	01.2	143		+5	57.4	148	54	38	22	08	03 13		0 58	88		
4	240	53.7		23.0	141	34.4	142		+6	12.3	149	52	49	30	14	07 15		55	82		
5	255	53.4	-23	23.1	156	07.5	141		+6	27.1	148	50	15 59	16 38	17 19	12 10 18		0 53	79		
6	270	53.1	-23	23.2	170	40.6	141		+6	42.0	149	45	16 20	16 54	17 31	12 16 23		0 49	73		
7	285	52.8		23.2	185	13.5	139		+6	56.8	148	40	37	17 07	41	22 27		45	69		
8	300	52.5		23.3	199	46.5	140		+7	11.6	148	35	16 51	19	51	26 31		42	66		
9	315	52.2		23.4	214	19.3	138			26.4	148	30	17 03	30	17 59	30 34		40	62		
10	330	51.9		23.5	228	52.1	138			41.2	148	20	24	17 48	18 16	38 39		35	56		
11	345	51.6	-23	23.5	243	24.8	137		+7	56.0	148	10 N	17 43	18 06	18 32	12 44 44		0 31	51		
12	0	51.2	-23	23.6	257	57.4	136		+8	10.7	147	0	18 00	18 23	18 49	12 50 49		0 27	47		
13	15	50.9		23.6	272	29.9	135			25.5	148	10 S	18	18 41	19 08	12 56 54		23	42		
14	30	50.6		23.7	287	02.3	134			40.2	147	20	37	19 01	19 31	13 03 58		19	37		
15	45	50.3		23.8	301	34.7	134		+8	54.9	147	30	18 59	26	20 00	11 64		14	32		
16	60	50.0		23.8	316	07.0	133		+9	09.6	147	35	19 12	19 42	18	15 67		12	28		
17	75	49.7	-23	23.9	330	39.2	132		+9	24.3	147	40	19 27	20 00	20 42	13 20 71		0 09	25		
18	90	49.4	-23	24.0	345	11.3	131		+9	38.9	146	45	19 45	20 22	21 12	13 26 76		0 05	21		
19	105	49.1		24.0	359	43.4	131		+9	53.6	147	50	20 08	20 52	21 58	33 81		0 01	16		
20	120	48.8		24.1	14	15.3	129		+10	08.2	146	52	18	21 07	22 26	36 84		** ** *	**		
21	135	48.5		24.1	28	47.1	128			22.7	145	54	31	25	23 12	40 87		** ** *	**		
22	150	48.2		24.2	43	18.9	128			37.3	146	56	20 45	21 48	** ** *	44 90		** ** *	**		
23	165	47.9		24.3	57	50.6	127		+10	51.8	145	58	21 02	22 17	** ** *	49 94		23 56	8		
24	180	47.6	-23	24.3	72	22.1	125		+11	06.3	145	60 S	21 22	23 08	** ** *	13 54 98		23 50	3		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG 18 ^h 10.5 ^m			Mag: -4.7 PMG: 8 ^h 49 ^m			Mag: +0.1 PMG: 4 ^h 53 ^m			Mag: -2.3 PMG: 4 ^h 11 ^m			Mag: +0.7 PMG: 18 ^h 44 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°						
0	86	37.5	227	42.5	-12	05.2	286	34.9	+11	26.8	297	07.3	+13	20.2	78	18.5	+0	51.1			
1	101	40.0	242	42.8		05.7	301	36.7		26.6	312	09.8		20.2	93	20.9		51.1			
2	116	42.5	257	43.1		06.3	316	38.6		26.4	327	12.3		20.3	108	23.3		51.2			
3	131	44.9	272	43.5		06.8	331	40.4		26.3	342	14.8		20.3	123	25.8		51.2			
4	146	47.4	287	43.8		07.4	346	42.2		26.1	357	17.3		20.3	138	28.2		51.2			
5	161	49.9	302	44.1	-12	07.9	1	44.1	+11	26.0	12	19.8	+13	20.3	153	30.7	+0	51.2			
6	176	52.3	317	44.4	-12	08.5	16	45.9	+11	25.8	27	22.3	+13	20.4	168	33.1	+0	51.3			
7	191	54.8	332	44.7		09.0	31	47.8		25.7	42	24.8		20.4	183	35.5		51.3			
8	206	57.2	347	45.1		09.5	46	49.6		25.5	57	27.3		20.4	198	38.0		51.3			
9	221	59.7	2	45.4		10.1	61	51.5		25.3	72	29.8		20.4	213	40.4		51.3			
10	237	02.2	17	45.7		10.6	76	53.3		25.2	87	32.3		20.5	228	42.9		51.3			
11	252	04.6	32	46.0	-12	11.2	91	55.2	+11	25.0	102	34.8	+13	20.5	243	45.3	+0	51.4			
12	267	07.1	47	46.3	-12	11.7	106	57.0	+11	24.9	117	37.3	+13	20.5	258	47.7	+0	51.4			
13	282	09.6	62	46.6		12.3	121	58.9		24.7	132	39.8		20.5	273	50.2		51.4			
14	297	12.0	77	47.0		12.8	137	00.8		24.6	147	42.3		20.6	288	52.6		51.4			
15	312	14.5	92	47.3		13.4	152	02.6		24.4	162	44.8		20.6	303	55.0		51.5			
16	327	17.0	107	47.6		13.9	167	04.5		24.2	177	47.4		20.6	318	57.5		51.5			
17	342	19.4	122	47.9	-12	14.5	182	06.3	+11	24.1	192	49.9	+13	20.6	333	59.9	+0	51.5			
18	357	21.9	137	48.2	-12	15.0	197	08.2	+11	23.9	207	52.4	+13	20.7	349	02.3	+0	51.5			
19	12	24.3	152	48.5		15.6	212	10.0		23.8	222	54.9		20.7	4	04.8		51.6			
20	27	26.8	167	48.8		16.1	227	11.9		23.6	237	57.4		20.7	19	07.2		51.6			
21	42	29.3	182	49.1		16.7	242	13.8		23.5	252	59.9		20.7	34	09.6		51.6			
22	57	31.7	197	49.4		17.2	257	15.6		23.3	268	02.4		20.8	49	12.1		51.6			
23	72	34.2	212	49.7		17.8	272	17.5		23.2	283	04.9		20.8	64	14.5		51.7			
24	87	36.7	227	50.0	-12	18.3	287	19.3	+11	23.0	298	07.4	+13	20.8	79	17.0	+0	51.7			
Dif	—			+3			-5			+19			-2			+25			0		

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 11 ^h 57.1 ^m			Edad: 10.0 ^d SD: 15/7 PMG: 19 ^h 50 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°		°	h m	h m	h m	h m m	h m m	h m m	
0	180	47.6	-23	24.3	72	22.1	+11	06.3	144	60 N	7 06	8 03	9 01	11 53	3	2 39	100
1	195	47.2		24.4	86	53.6		20.7	144	58	6 59	7 51	8 43	12 01	8	32	95
2	210	46.9		24.4	101	25.0		35.1	144	56	52	41	28	08	13	26	91
3	225	46.6		24.5	115	56.3	+11	49.5	144	54	46	32	16	15	15	20	88
4	240	46.3		24.5	130	27.4	+12	03.9	144	52	40	24	8 05	21	18	15	85
5	255	46.0	-23	24.6	144	58.5	+12	18.2	143	50	6 35	7 16	7 55	12 26	21	2 11	82
6	270	45.7	-23	24.6	159	29.5	+12	32.5	143	45	6 23	7 00	7 34	12 38	26	2 01	76
7	285	45.4		24.7	174	00.3	+12	46.7	142	40	12	6 47	17	47	31	1 53	72
8	300	45.1		24.7	188	31.1	+13	00.9	142	35	6 03	35	7 03	12 56	34	46	68
9	315	44.8		24.8	203	01.8		15.0	141	30	5 54	24	6 51	13 03	38	40	65
10	330	44.5		24.8	217	32.3		29.1	141	20	38	6 05	29	16	43	30	59
11	345	44.2	-23	24.9	232	02.7	+13	43.2	141	10 N	5 22	5 48	6 11	13 27	48	1 21	54
12	0	43.9	-23	24.9	246	33.1	+13	57.2	140	0	5 05	5 31	5 53	13 38	52	1 12	50
13	15	43.6		25.0	261	03.3	+14	11.2	140	10 S	4 46	5 13	36	13 48	57	1 04	45
14	30	43.2		25.0	275	33.4		25.1	139	20	4 23	4 52	5 17	14 00	61	0 55	40
15	45	42.9		25.1	290	03.3		38.9	138	30	3 54	27	4 55	13	67	45	35
16	60	42.6		25.1	304	33.2	+14	52.7	138	35	35	4 12	42	21	70	39	32
17	75	42.3	-23	25.2	319	03.0	+15	06.5	138	40	3 12	3 54	4 27	14 30	74	0 32	28
18	90	42.0	-23	25.2	333	32.6	+15	20.1	136	45	2 41	3 31	4 09	14 40	79	0 25	23
19	105	41.7		25.2	348	02.1		33.8	137	50	1 56	3 01	3 46	53	85	16	18
20	120	41.4		25.3	2	31.5	+15	47.3	135	52	1 28	2 46	35	14 59	88	12	15
21	135	41.1		25.3	17	00.7	+16	00.8	135	54	0 41	28	23	15 06	91	07	13
22	150	40.8		25.4	31	29.9		14.2	134	56	** **	2 06	3 09	13	95	0 02	9
23	165	40.5		25.4	45	58.9		27.6	134	58	** **	1 36	2 52	21	100	** **	**
24	180	40.2	-23	25.4	60	27.8	+16	40.9	133	60 S	** **	0 46	2 31	15 31	105	23 52	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 06.6 ^m		Mag: -4.7 PMG: 8 ^h 48 ^m		Mag: +0.1 PMG: 4 ^h 50 ^m		Mag: -2.3 PMG: 4 ^h 07 ^m		Mag: +0.7 PMG: 18 ^h 40 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	°	'	°	'	°	°	'	°	'						
0	87	36.7	227	50.0	-12	18.3	287	19.3	+11	23.0	298	07.4	+13	20.8	79	17.0	+0	51.7
1	102	39.1	242	50.3		18.9	302	21.2		22.9	313	09.9		20.8	94	19.4		51.7
2	117	41.6	257	50.6		19.4	317	23.1		22.7	328	12.4		20.9	109	21.8		51.7
3	132	44.1	272	50.9		20.0	332	24.9		22.6	343	14.9		20.9	124	24.3		51.8
4	147	46.5	287	51.2		20.5	347	26.8		22.4	358	17.4		20.9	139	26.7		51.8
5	162	49.0	302	51.5	-12	21.1	2	28.7	+11	22.3	13	19.9	+13	20.9	154	29.1	+0	51.8
6	177	51.5	317	51.8	-12	21.6	17	30.5	+11	22.1	28	22.5	+13	21.0	169	31.6	+0	51.8
7	192	53.9	332	52.1		22.2	32	32.4		22.0	43	25.0		21.0	184	34.0		51.9
8	207	56.4	347	52.4		22.8	47	34.3		21.8	58	27.5		21.0	199	36.4		51.9
9	222	58.8	2	52.6		23.3	62	36.2		21.7	73	30.0		21.1	214	38.9		51.9
10	238	01.3	17	52.9		23.9	77	38.0		21.5	88	32.5		21.1	229	41.3		51.9
11	253	03.8	32	53.2	-12	24.4	92	39.9	+11	21.4	103	35.0	+13	21.1	244	43.7	+0	52.0
12	268	06.2	47	53.5	-12	25.0	107	41.8	+11	21.2	118	37.5	+13	21.1	259	46.2	+0	52.0
13	283	08.7	62	53.8		25.5	122	43.6		21.1	133	40.0		21.2	274	48.6		52.0
14	298	11.2	77	54.1		26.1	137	45.5		20.9	148	42.5		21.2	289	51.0		52.0
15	313	13.6	92	54.3		26.7	152	47.4		20.8	163	45.1		21.2	304	53.5		52.1
16	328	16.1	107	54.6		27.2	167	49.3		20.6	178	47.6		21.2	319	55.9		52.1
17	343	18.6	122	54.9	-12	27.8	182	51.2	+11	20.5	193	50.1	+13	21.3	334	58.3	+0	52.1
18	358	21.0	137	55.2	-12	28.3	197	53.0	+11	20.3	208	52.6	+13	21.3	350	00.7	+0	52.1
19	13	23.5	152	55.5		28.9	212	54.9		20.2	223	55.1		21.3	5	03.2		52.2
20	28	26.0	167	55.7		29.4	227	56.8		20.0	238	57.6		21.4	20	05.6		52.2
21	43	28.4	182	56.0		30.0	242	58.7		19.9	254	00.1		21.4	35	08.0		52.2
22	58	30.9	197	56.3		30.6	258	00.6		19.7	269	02.6		21.4	50	10.5		52.2
23	73	33.3	212	56.5		31.1	273	02.4		19.6	284	05.2		21.5	65	12.9		52.3
24	88	35.8	227	56.8	-12	31.7	288	04.3	+11	19.5	299	07.7	+13	21.5	80	15.3	+0	52.3
Dif	—		+3		-6		+19		-1		+25		0		+24			

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 11 ^h 57.6 ^m				Edad: 11.0 ^d SD: 16 ^h 0 PMG: 20 ^h 43 ^m PHE { 4 ^h : 59 ^h 0 12 ^h : 59 ^h 3 20 ^h : 59 ^h 6 R°: 61 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif							Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'					°	h m	h m	h m	h m m	h m m	h m m	
0	180	40.2	-23	25.4	60	27.8	+16	40.9	132	60 N	14 54	15 52	16 48	11 56	10	4 19	110	
1	195	39.9		25.5	74	56.6	+16	54.1	132	58	15 11	16 03	16 56	12 09	16	4 07	104	
2	210	39.5		25.5	89	25.2	+17	07.3	130	56	26	14	17 03	21 20	3	57	98	
3	225	39.2		25.5	103	53.7		20.3	130	54	39	23	09	30 25	48	94		
4	240	38.9		25.6	118	22.1		33.3	130	52	15 50	31	15	39 28	40	91		
5	255	38.6	-23	25.6	132	50.3	+17	46.2	129	50	16 00	16 38	17 20	12 47	31	3 33	87	
6	270	38.3	-23	25.6	147	18.4	+17	59.1	129	45	16 21	16 54	17 32	13 04	36	3 17	82	
7	285	38.0		25.7	161	46.4	+18	11.8	127	40	37	17 08	42	18 41	3	05	77	
8	300	37.7		25.7	176	14.3		24.5	127	35	16 52	20	17 52	30 44	2	54	73	
9	315	37.4		25.7	190	42.0		37.1	126	30	17 04	30	18 00	41 47	45	70		
10	330	37.1		25.8	205	09.5	+18	49.6	125	20	25	17 49	17	13 59	52	29	65	
11	345	36.8	-23	25.8	219	37.0	+19	02.0	124	10 N	17 44	18 07	18 33	14 15	56	2 15	60	
12	0	36.5	-23	25.8	234	04.3	+19	14.3	123	0	18 01	18 24	18 50	14 30	59	2 02	56	
13	15	36.1		25.8	248	31.4		26.5	122	10 S	19	18 42	19 09	14 45	63	1 49	52	
14	30	35.8		25.9	262	58.5		38.6	121	20	18 38	19 03	19 32	15 01	68	35	48	
15	45	35.5		25.9	277	25.4	+19	50.6	120	30	19 00	28	20 01	20 73	20	42		
16	60	35.2		25.9	291	52.1	+20	02.5	119	35	13	19 43	20	31 76	11	39		
17	75	34.9	-23	25.9	306	18.7	+20	14.3	118	40	19 28	20 01	20 43	15 44	79	1 00	36	
18	90	34.6	-23	26.0	320	45.2	+20	26.1	118	45	19 46	20 24	21 13	15 59	83	0 48	32	
19	105	34.3		26.0	335	11.5		37.6	115	50	20 09	20 53	21 59	16 18	89	34	26	
20	120	34.0		26.0	349	37.7	+20	49.1	115	52	20	21 09	22 27	27 92	27	23		
21	135	33.7		26.0	4	03.7	+21	00.5	114	54	32	27	23 14	37 96	20	19		
22	150	33.4		26.0	18	29.6		11.8	113	56	20 46	21 49	** **	16 48	100	11	16	
23	165	33.1		26.1	32	55.4		22.9	111	58	21 03	22 19	** **	17 01	106	0 02	11	
24	180	32.7	-23	26.1	47	21.0	+21	33.9	110	60 S	21 24	23 10	** **	17 16	115	23 56	12	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 18 ^h 02.6 ^m		Mag: -4.7 PMG: 8 ^h 48 ^m		Mag: +0.1 PMG: 4 ^h 47 ^m		Mag: -2.3 PMG: 4 ^h 03 ^m		Mag: +0.7 PMG: 18 ^h 36 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	88	35.8	227	56.8	-12	31.7	299	07.7	+13	21.5
1	103	38.3	242	57.1		32.2	314	10.2		21.5
2	118	40.7	257	57.3		32.8	329	12.7		21.5
3	133	43.2	272	57.6		33.4	344	15.2		21.6
4	148	45.7	287	57.9		33.9	359	17.7		21.6
5	163	48.1	302	58.1	-12	34.5	14	20.3	+13	21.6
6	178	50.6	317	58.4	-12	35.1	29	22.8	+13	21.7
7	193	53.1	332	58.7		35.6	44	25.3		21.7
8	208	55.5	347	58.9		36.2	59	27.8		21.7
9	223	58.0	2	59.2		36.8	74	30.3		21.7
10	239	00.4	17	59.4		37.3	89	32.9		21.8
11	254	02.9	32	59.7	-12	37.9	104	35.4	+13	21.8
12	269	05.4	47	59.9	-12	38.4	119	37.9	+13	21.8
13	284	07.8	63	00.2		39.0	134	40.4		21.9
14	299	10.3	78	00.5		39.6	149	42.9		21.9
15	314	12.8	93	00.7		40.1	164	45.4		21.9
16	329	15.2	108	01.0		40.7	179	48.0		22.0
17	344	17.7	123	01.2	-12	41.3	194	50.5	+13	22.0
18	359	20.2	138	01.4	-12	41.8	209	53.0	+13	22.0
19	14	22.6	153	01.7		42.4	224	55.5		22.1
20	29	25.1	168	01.9		43.0	239	58.1		22.1
21	44	27.6	183	02.2		43.6	255	00.6		22.1
22	59	30.0	198	02.4		44.1	270	03.1		22.2
23	74	32.5	213	02.7		44.7	285	05.6		22.2
24	89	34.9	228	02.9	-12	45.3	300	08.1	+13	22.2
Dif	—		+3		-6		+19		0	
							+25			
									+24	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 58.1 ^m			Edad: 12.0 ^d SD: 16'3 PMG: 21 ^h 43 ^m						PHE { 4 ^h : 59'9 12 ^h : 60'2 20 ^h : 60'4 R°: 65 ^m			Hora R°			Hora R°			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil								
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	180	32.7	-23	26.1	47	21.0	+21	33.9	60 N	7	07	8	04	9	02	12	04	19	08 111
1	195	32.4		26.1	61	46.5		44.8	58	7	00	7	52	8	44	23	27	5	49 103
2	210	32.1		26.1	76	11.8	+21	55.6	56	6	53		42	30	40	32		34	97
3	225	31.8		26.1	90	37.0	+22	06.3	54		47		33	17	12	53	37	21	92
4	240	31.5		26.1	105	02.0		16.8	52		41		25	8	06	13	06	39	5 09 90
5	255	31.2	-23	26.1	119	26.9	+22	27.2	50	6	36	7	17	7	56	13	16	42	4 59 87
6	270	30.9	-23	26.2	133	51.7	+22	37.5	45	6	24	7	01	7	35	13	39	47	4 38 81
7	285	30.6		26.2	148	16.3		47.6	40		14	6	48	18	13	57	50	20	78
8	300	30.3		26.2	162	40.8	+22	57.6	35	6	04		36	7	04	14	13	52	4 06 75
9	315	30.0		26.2	177	05.1	+23	07.4	30	5	55		25	6	52	26	55	3	53 72
10	330	29.7		26.2	191	29.3		17.1	20		39	6	06	30	14	49	58	32	68
11	345	29.3	-23	26.2	205	53.4	+23	26.7	10 N	5	23	5	49	6	12	15	09	61	3 14 64
12	0	29.0	-23	26.2	220	17.3	+23	36.1	0	5	06	5	32	5	54	15	28	64	2 57 61
13	15	28.7		26.2	234	41.1		45.4	93	4	47	5	14	37	15	47	66	40	57
14	30	28.4		26.2	249	04.7	+23	54.5	20	4	24	4	53	5	18	16	07	70	21 55
15	45	28.1		26.2	263	28.2	+24	03.5	90	3	55		28	4	56	31	73	2	01 49
16	60	27.8		26.2	277	51.6		12.3	88		36	4	13	43	16	45	75	1	49 47
17	75	27.5	-23	26.2	292	14.8	+24	21.0	87	40	3	13	3	55	4	27	17	01	77
18	90	27.2	-23	26.2	306	37.9	+24	29.5	85	45	2	42	3	32	4	09	17	21	80
19	105	26.9		26.2	321	00.9		37.8	83	50	1	56	3	02	3	47	46	84	0 58 35
20	120	26.6		26.2	335	23.7		46.0	82	52	1	28	2	47	36	17	57	87	49 31
21	135	26.2		26.2	349	46.4	+24	54.0	80	54	0	41		29	24	18	11	89	38 28
22	150	25.9		26.2	4	09.0	+25	01.8	78	56	**	**	2	07	3	09	27	93	26 24
23	165	25.6		26.2	18	31.4		09.5	77	58	**	**	1	37	2	52	18	46	99
24	180	25.3	-23	26.2	32	53.7	+25	17.0	75	60 S	**	**	0	45	2	32	19	09	109

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 58.7 ^m		Mag: -4.7 PMG: 8 ^h 48 ^m		Mag: 0.0 PMG: 4 ^h 44 ^m		Mag: -2.3 PMG: 3 ^h 59 ^m		Mag: +0.7 PMG: 18 ^h 32 ^m	
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	89	34.9	228	02.9	-12	45.3	288	49.8	+11	16.1
1	104	37.4	243	03.1		45.8	303	51.7		16.0
2	119	39.9	258	03.4		46.4	318	53.6		15.8
3	134	42.3	273	03.6		47.0	333	55.5		15.7
4	149	44.8	288	03.8		47.5	348	57.4		15.6
5	164	47.3	303	04.1	-12	48.1	3	59.3	+11	15.4
6	179	49.7	318	04.3	-12	48.7	19	01.2	+11	15.3
7	194	52.2	333	04.5		49.3	34	03.1		15.2
8	209	54.7	348	04.8		49.8	49	05.0		15.0
9	224	57.1	3	05.0		50.4	64	07.0		14.9
10	239	59.6	18	05.2		51.0	79	08.9		14.8
11	255	02.1	33	05.5	-12	51.5	94	10.8	+11	14.6
12	270	04.5	48	05.7	-12	52.1	109	12.7	+11	14.5
13	285	07.0	63	05.9		52.7	124	14.6		14.4
14	300	09.4	78	06.1		53.3	139	16.5		14.2
15	315	11.9	93	06.4		53.8	154	18.5		14.1
16	330	14.4	108	06.6		54.4	169	20.4		14.0
17	345	16.8	123	06.8	-12	55.0	184	22.3	+11	13.8
18	0	19.3	138	07.0	-12	55.6	199	24.2	+11	13.7
19	15	21.8	153	07.2		56.1	214	26.1		13.6
20	30	24.2	168	07.4		56.7	229	28.1		13.5
21	45	26.7	183	07.7		57.3	244	30.0		13.3
22	60	29.2	198	07.9		57.9	259	31.9		13.2
23	75	31.6	213	08.1		58.4	274	33.8		13.1
24	90	34.1	228	08.3	-12	59.0	289	35.8	+11	12.9
Dif	—		+2		-6		+19		-1	
							+25		0	
									+24	
									0	

UT	SOL				LUNA							Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 ^m PMG: 11 ^h 58.6 ^m				Edad: 13.0 ^d SD: 16 ^h 5 ^m PMG: 22 ^h 48 ^m PHE { 4 ^h : 60 ^m 7 ^s 12 ^h : 60 ^m 9 ^s 20 ^h : 61 ^m 1 ^s R°: 69 ^m														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora			R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	180	25.3	-23	26.2	32	53.7	32	+25	17.0	73	60 N	14 55	15 53	16 49	12 23 48	7 59 95			
1	195	25.0		26.2	47	15.9	31		24.3	72	58	15 12	16 04	16 57	12 50 55	32 89			
2	210	24.7		26.2	61	38.0	30		31.5	69	56	27	15	17 04	13 12 57	7 11 85			
3	225	24.4		26.2	76	00.0	30		38.4	68	54	40	24	10	30 59	6 53 84			
4	240	24.1		26.2	90	21.8	28		45.2	66	52	15 51	32	16	45 61	39 81			
5	255	23.8	-23	26.2	104	43.5	27	+25	51.8	65	50	16 01	16 39	17 21	13 58 62	6 26 80			
6	270	23.5	-23	26.2	119	05.1	26	+25	58.3	65	45	16 22	16 55	17 33	14 26 63	5 59 77			
7	285	23.1		26.2	133	26.6	25	+26	04.5	62	40	38	17 09	43	14 47 65	38 76			
8	300	22.8		26.2	147	47.9	23		10.6	61	35	16 53	21	17 53	15 05 66	21 74			
9	315	22.5		26.2	162	09.2	23		16.4	57	30	17 05	31	18 01	21 66	5 05 73			
10	330	22.2		26.2	176	30.4	22		22.1	58	20	26	17 50	18	15 47 68	4 40 71			
11	345	21.9	-23	26.2	190	51.4	20	+26	27.6	55	10 N	17 45	18 08	18 34	16 10 69	4 18 69			
12	0	21.6	-23	26.2	205	12.4	20	+26	32.9	53	0	18 02	18 25	18 51	16 32 69	3 58 67			
13	15	21.3		26.1	219	33.2	18		37.9	50	10 S	20	18 43	19 10	16 53 70	37 66			
14	30	21.0		26.1	233	54.0	18		42.8	49	20	18 39	19 04	19 33	17 17 70	3 16 63			
15	45	20.7		26.1	248	14.6	16		47.5	47	30	19 01	28	20 02	17 44 70	2 50 62			
16	60	20.4		26.1	262	35.2	16		52.0	45	35	14	19 44	21	18 00 71	36 59			
17	75	20.1	-23	26.1	276	55.7	15	+26	56.3	43	40	19 29	20 02	20 44	18 18 72	2 19 57			
18	90	19.7	-23	26.1	291	16.1	14	+27	00.4	41	45	19 47	20 25	21 14	18 41 72	1 58 55			
19	105	19.4		26.0	305	36.4	13		04.2	38	50	20 10	20 54	22 00	19 10 72	33 51			
20	120	19.1		26.0	319	56.6	12		07.9	37	52	21	21 10	22 28	24 73	20 50			
21	135	18.8		26.0	334	16.8	12		11.3	34	54	33	28	23 15	19 40 74	1 06 47			
22	150	18.5		26.0	348	36.9	11		14.6	33	56	20 47	21 50	** **	20 00 74	0 50 43			
23	165	18.2		26.0	2	56.9	10		17.6	30	58	21 04	22 20	** **	25 74	30 39			
24	180	17.9	-23	25.9	17	16.9	10	+27	20.4	28	60 S	21 25	23 11	** **	20 58 74	0 06 29			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 54.8 ^m		Mag: -4.7 PMG: 8 ^h 47 ^m		Mag: 0.0 PMG: 4 ^h 41 ^m		Mag: -2.3 PMG: 3 ^h 55 ^m		Mag: +0.7 PMG: 18 ^h 28 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	90	34.1	228	08.3	-12	59.0	289	35.8	+11	12.9	301	08.8	+13	23.0	82	11.8	+0	53.6
1	105	36.6	243	08.5	-12	59.6	304	37.7		12.8	316	11.3		23.0	97	14.2		53.6
2	120	39.0	258	08.7	-13	00.2	319	39.6		12.7	331	13.9		23.1	112	16.6		53.7
3	135	41.5	273	08.9		00.8	334	41.5		12.6	346	16.4		23.1	127	19.1		53.7
4	150	43.9	288	09.1		01.3	349	43.5		12.4	1	18.9		23.2	142	21.5		53.7
5	165	46.4	303	09.3	-13	01.9	4	45.4	+11	12.3	16	21.5	+13	23.2	157	23.9	+0	53.8
6	180	48.9	318	09.5	-13	02.5	19	47.3	+11	12.2	31	24.0	+13	23.2	172	26.3	+0	53.8
7	195	51.3	333	09.7		03.1	34	49.3		12.1	46	26.5		23.3	187	28.8		53.8
8	210	53.8	348	09.9		03.7	49	51.2		11.9	61	29.1		23.3	202	31.2		53.9
9	225	56.3	3	10.1		04.2	64	53.1		11.8	76	31.6		23.3	217	33.6		53.9
10	240	58.7	18	10.3		04.8	79	55.1		11.7	91	34.1		23.4	232	36.0		53.9
11	256	01.2	33	10.5	-13	05.4	94	57.0	+11	11.6	106	36.7	+13	23.4	247	38.4	+0	54.0
12	271	03.7	48	10.7	-13	06.0	109	58.9	+11	11.4	121	39.2	+13	23.4	262	40.9	+0	54.0
13	286	06.1	63	10.9		06.6	125	00.9		11.3	136	41.7		23.5	277	43.3		54.0
14	301	08.6	78	11.1		07.1	140	02.8		11.2	151	44.3		23.5	292	45.7		54.0
15	316	11.1	93	11.3		07.7	155	04.7		11.1	166	46.8		23.5	307	48.1		54.1
16	331	13.5	108	11.5		08.3	170	06.7		11.0	181	49.3		23.6	322	50.5		54.1
17	346	16.0	123	11.7	-13	08.9	185	08.6	+11	10.8	196	51.9	+13	23.6	337	53.0	+0	54.1
18	1	18.4	138	11.9	-13	09.5	200	10.6	+11	10.7	211	54.4	+13	23.7	352	55.4	+0	54.2
19	16	20.9	153	12.1		10.0	215	12.5		10.6	226	56.9		23.7	7	57.8		54.2
20	31	23.4	168	12.3		10.6	230	14.4		10.5	241	59.5		23.7	23	00.2		54.2
21	46	25.8	183	12.5		11.2	245	16.4		10.4	257	02.0		23.8	38	02.6		54.3
22	61	28.3	198	12.6		11.8	260	18.3		10.2	272	04.6		23.8	53	05.0		54.3
23	76	30.8	213	12.8		12.4	275	20.3		10.1	287	07.1		23.8	68	07.5		54.3
24	91	33.2	228	13.0	-13	13.0	290	22.2	+11	10.0	302	09.6	+13	23.9	83	09.9	+0	54.4
Dif	—		+2		-6		+19		-1		+25		0		+24		0	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 11 ^h 59.1 ^m			Edad: 14.0 ^d PHE { 4 ^h : 61/2 12 ^h : 61/4 20 ^h : 61/4 R°: 67 ^m PMG: 23 ^h 55 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	m
0	180	17.9	-23	25.9	17	16.9	8	+27	20.4	27	60 N	7 08	8 05	9 03	13 10	92	9 33 50
1	195	17.6		25.9	31	36.7	8		23.1	23	58	7 01	7 53	8 45	13 43	87	8 59 56
2	210	17.3		25.9	45	56.6	8		25.4	22	56	6 54	43	31	14 08	83	35 58
3	225	17.0		25.9	60	16.4	8		27.6	20	54	48	34	18	28 81		8 15 60
4	240	16.6		25.8	74	36.1	7		29.6	17	52	42	26	8 07	44 80		7 58 62
5	255	16.3	-23	25.8	88	55.7	6	+27	31.3	16	50	6 37	7 18	7 57	14 59	78	7 44 62
6	270	16.0	-23	25.8	103	15.4	7	+27	32.9	13	45	6 25	7 02	7 36	15 28	76	7 15 64
7	285	15.7		25.8	117	35.0	6		34.2	16	40	14	6 49	19	15 51	74	6 52 65
8	300	15.4		25.7	131	54.5	5		35.3	11	35	6 05	37	7 05	16 10	73	33 66
9	315	15.1		25.7	146	14.0	5		36.1	8	30	5 56	26	6 53	26 72		6 17 66
10	330	14.8		25.7	160	33.5	5		36.8	7	20	40	6 07	31	16 53	71	5 49 67
11	345	14.5	-23	25.7	174	53.0	5	+27	37.2	4	10 N	5 24	5 50	6 13	17 17	69	5 26 67
12	0	14.2	-23	25.6	189	12.4	4	+27	37.4	2	0	5 07	5 33	5 55	17 39	68	5 04 68
13	15	13.9		25.6	203	31.8	4		37.4	0	10 S	4 48	5 15	38	18 01	66	4 42 68
14	30	13.5		25.6	217	51.2	4		37.2	2	20	4 25	4 54	5 19	25 64		4 18 69
15	45	13.2		25.5	232	10.6	4		36.7	5	30	3 56	29	4 57	18 53	62	3 50 69
16	60	12.9		25.5	246	30.0	4		36.0	7	35	37	4 14	44	19 09	61	34 69
17	75	12.6	-23	25.4	260	49.3	3	+27	35.1	9	40	3 14	3 56	4 28	19 28	59	3 15 69
18	90	12.3	-23	25.4	275	08.7	4	+27	34.0	11	45	2 43	3 33	4 10	19 51	57	2 52 70
19	105	12.0		25.4	289	28.1	4		32.6	14	50	1 57	3 03	3 48	20 21	53	23 70
20	120	11.7		25.3	303	47.5	4		31.1	15	52	1 29	2 48	37	35 51		2 08 70
21	135	11.4		25.3	318	06.9	4		29.3	18	54	0 42	30	25	20 52	48	1 52 70
22	150	11.1		25.3	332	26.3	4		27.3	20	56	** **	2 08	3 10	21 12	45	32 70
23	165	10.8		25.2	346	45.7	4		25.0	23	58	** **	1 38	2 53	21 37	40	1 07 70
24	180	10.5	-23	25.2	1	05.1	4	+27	22.6	24	60 S	** **	0 46	2 33	22 11	31	0 34 69

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 50.9 ^m		Mag: -4.7 PMG: 8 ^h 47 ^m		Mag: 0.0 PMG: 4 ^h 38 ^m		Mag: -2.4 PMG: 3 ^h 51 ^m		Mag: +0.7 PMG: 18 ^h 24 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	91	33.2	228	13.0	-13	13.0	290	22.2	+11	10.0	302	09.6	+13	23.9	83	09.9	+0	54.4
1	106	35.7	243	13.2		13.5	305	24.2		09.9	317	12.2		23.9	98	12.3		54.4
2	121	38.2	258	13.4		14.1	320	26.1		09.8	332	14.7		24.0	113	14.7		54.4
3	136	40.6	273	13.5		14.7	335	28.1		09.6	347	17.3		24.0	128	17.1		54.4
4	151	43.1	288	13.7		15.3	350	30.0		09.5	2	19.8		24.0	143	19.6		54.5
5	166	45.6	303	13.9	-13	15.9	5	32.0	+11	09.4	17	22.3	+13	24.1	158	22.0	+0	54.5
6	181	48.0	318	14.1	-13	16.5	20	33.9	+11	09.3	32	24.9	+13	24.1	173	24.4	+0	54.5
7	196	50.5	333	14.3		17.0	35	35.9		09.2	47	27.4		24.1	188	26.8		54.6
8	211	52.9	348	14.4		17.6	50	37.8		09.1	62	30.0		24.2	203	29.2		54.6
9	226	55.4	3	14.6		18.2	65	39.8		08.9	77	32.5		24.2	218	31.6		54.6
10	241	57.9	18	14.8		18.8	80	41.7		08.8	92	35.0		24.3	233	34.1		54.7
11	257	00.3	33	14.9	-13	19.4	95	43.7	+11	08.7	107	37.6	+13	24.3	248	36.5	+0	54.7
12	272	02.8	48	15.1	-13	20.0	110	45.7	+11	08.6	122	40.1	+13	24.3	263	38.9	+0	54.7
13	287	05.3	63	15.3		20.6	125	47.6		08.5	137	42.7		24.4	278	41.3		54.8
14	302	07.7	78	15.4		21.1	140	49.6		08.4	152	45.2		24.4	293	43.7		54.8
15	317	10.2	93	15.6		21.7	155	51.5		08.3	167	47.8		24.5	308	46.1		54.8
16	332	12.7	108	15.8		22.3	170	53.5		08.2	182	50.3		24.5	323	48.5		54.9
17	347	15.1	123	15.9	-13	22.9	185	55.5	+11	08.0	197	52.8	+13	24.5	338	51.0	+0	54.9
18	2	17.6	138	16.1	-13	23.5	200	57.4	+11	07.9	212	55.4	+13	24.6	353	53.4	+0	54.9
19	17	20.1	153	16.3		24.1	215	59.4		07.8	227	57.9		24.6	8	55.8		55.0
20	32	22.5	168	16.4		24.7	231	01.4		07.7	243	00.5		24.6	23	58.2		55.0
21	47	25.0	183	16.6		25.3	246	03.3		07.6	258	03.0		24.7	39	00.6		55.0
22	62	27.4	198	16.7		25.9	261	05.3		07.5	273	05.6		24.7	54	03.0		55.1
23	77	29.9	213	16.9		26.4	276	07.3		07.4	288	08.1		24.8	69	05.5		55.1
24	92	32.4	228	17.0	-13	27.0	291	09.2	+11	07.3	303	10.7	+13	24.8	84	07.9	+0	55.1
Dif	—		+2		-6		+20		-1		+25		0		+24			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG:12 ^h 00.0 ^m			Edad: 16.0 ^d SD: 16'7 PMG: 1 ^h 02 ^m												
	PHE { 4 ^h : 61'4 12 ^h : 61'3 20 ^h : 61'1 R°: 63 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	03.0	-23	345	07.6	+25	19.5	76	60 N	7 09	8 06	9 03	16 37 115	10 44 8		
1	195	02.7		359	28.7		11.9	79	58	7 01	7 54	8 46	16 56 107	24 15		
2	210	02.4		13	49.9	+25	04.0	80	56	6 55	44	31	17 11 103	10 08 20		
3	225	02.1		28	11.2	+24	56.0	83	54	48	35	19	25 98	9 54 24		
4	240	01.8		42	32.6		47.7	84	52	43	26	8 07	36 95	41 28		
5	255	01.5	-23	56	54.1	+24	39.3		50	6 37	7 19	7 58	17 47 91	9 31 30		
6	270	01.2	-23	71	15.8	+24	30.8	85	45	6 26	7 03	7 37	18 08 85	9 08 36		
7	285	00.9		85	37.5		22.0	88	40	15	6 49	20	26 80	8 49 41		
8	300	00.6		99	59.4		13.0	90	35	6 06	38	7 06	40 77	34 44		
9	315	00.2		114	21.3	+24	03.9	91	30	5 57	27	6 53	18 53 73	8 20 48		
10	329	59.9		128	43.4	+23	54.6	93	20	41	6 08	32	19 14 68	7 57 53		
11	344	59.6	-23	143	05.6	+23	45.2	94	10 N	5 25	5 51	6 14	19 33 63	7 37 57		
12	359	59.3	-23	157	28.0	+23	35.5	97	0	5 08	5 34	5 56	19 50 58	7 17 62		
13	14	59.0		171	50.4		25.8	97	10 S	4 49	5 16	39	20 07 54	6 58 65		
14	29	58.7		186	13.0		15.8	100	20	4 26	4 55	5 20	26 49	38 69		
15	44	58.4		200	35.7	+23	05.7	101	30	3 57	30	4 58	47 43	6 14 74		
16	59	58.1		214	58.5	+22	55.4	103	35	38	4 15	45	20 59 40	5 59 78		
17	74	57.8	-23	229	21.5	+22	45.0	104	40	3 15	3 57	4 30	21 13 37	5 43 81		
18	89	57.5	-23	243	44.5	+22	34.4	106	45	2 44	3 34	4 12	21 30 31	5 23 86		
19	104	57.2		258	07.7		23.6	108	50	1 59	3 04	3 49	21 50 26	4 58 92		
20	119	56.9		272	31.1		12.7	109	52	1 31	2 49	38	22 00 22	46 95		
21	134	56.5		286	54.5	+22	01.7	110	54	0 45	31	26	10 20	32 99		
22	149	56.2		301	18.1	+21	50.5	112	56	** **	2 09	3 12	23 15	4 16 104		
23	164	55.9		315	41.9		39.2	113	58	** **	1 39	2 55	37 10	3 57 109		
24	179	55.6	-23	330	05.7	+21	27.7	115	60 S	** **	0 49	2 34	22 53 5	3 33 118		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 43.0 ^m		Mag: -4.6 PMG: 8 ^h 47 ^m		Mag: -0.1 PMG: 4 ^h 32 ^m		Mag: -2.4 PMG: 3 ^h 43 ^m		Mag: +0.7 PMG: 18 ^h 17 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	93	31.5	228	20.4	-13	41.2	291	56.8	+11	04.8
1	108	34.0	243	20.6		41.8	306	58.8		04.7
2	123	36.4	258	20.7		42.4	322	00.7		04.6
3	138	38.9	273	20.8		43.0	337	02.7		04.5
4	153	41.4	288	20.9		43.6	352	04.7		04.4
5	168	43.8	303	21.1	-13	44.2	7	06.7	+11	04.3
6	183	46.3	318	21.2	-13	44.8	22	08.7	+11	04.2
7	198	48.8	333	21.3		45.4	37	10.7		04.1
8	213	51.2	348	21.4		46.0	52	12.7		04.0
9	228	53.7	3	21.5		46.6	67	14.7		03.9
10	243	56.2	18	21.6		47.2	82	16.7		03.8
11	258	58.6	33	21.8	-13	47.8	97	18.7	+11	03.7
12	274	01.1	48	21.9	-13	48.4	112	20.7	+11	03.6
13	289	03.6	63	22.0		49.0	127	22.7		03.5
14	304	06.0	78	22.1		49.5	142	24.7		03.4
15	319	08.5	93	22.2		50.1	157	26.7		03.3
16	334	10.9	108	22.3		50.7	172	28.8		03.2
17	349	13.4	123	22.4	-13	51.3	187	30.8	+11	03.1
18	4	15.9	138	22.5	-13	51.9	202	32.8	+11	03.0
19	19	18.3	153	22.6		52.5	217	34.8		02.9
20	34	20.8	168	22.8		53.1	232	36.8		02.8
21	49	23.3	183	22.9		53.7	247	38.8		02.8
22	64	25.7	198	23.0		54.3	262	40.8		02.7
23	79	28.2	213	23.1		54.9	277	42.8		02.6
24	94	30.7	228	23.2	-13	55.5	292	44.8	+11	02.5
Dif	—		+1		-6		+20		-1	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16'3 PMG: 12 ^h 00.5 ^m				Edad: 17.0 ^d SD: 16'6 PMG: 2 ^h 05 ^m PHE { 4 ^h : 60'9 12 ^h : 60'7 20 ^h : 60'5 R°: 58 ^m																
	hG ☉	Dec			hG ☾	Dif			Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m				
0	179	55.6	-23	22.2	330	05.7	50	+21	27.7	116	60 N	14 58	15 55	16 52	18 32	108	10 52 5				
1	194	55.3		22.2	344	29.7	51		16.1	118	58	15 15	16 07	17 00	43 104		39 11				
2	209	55.0		22.1	358	53.8	53	+21	04.3	118	56	30	17	06	18 54	99	28 15				
3	224	54.7		22.0	13	18.1	54	+20	52.5	121	54	42	26	12	19 03	95	18 18				
4	239	54.4		21.9	27	42.5	54		40.4	121	52	15 53	34	18	11 92		09 22				
5	254	54.1	-23	21.8	42	07.0	55	+20	28.3	121	50	16 03	16 42	17 23	19 18	89	10 01 24				
6	269	53.8	-23	21.7	56	31.7	57	+20	16.0	123	45	16 24	16 58	17 35	19 33	83	9 44 30				
7	284	53.5		21.7	70	56.4	57	+20	03.6	124	40	41	17 11	45	46 78		30 35				
8	299	53.2		21.6	85	21.4	60	+19	51.1	125	35	16 55	23	17 55	19 57	73	18 39				
9	314	52.9		21.5	99	46.4	60		38.5	126	30	17 07	34	18 03	20 06	70	9 08 41				
10	329	52.5		21.4	114	11.6	62		25.8	127	20	28	17 52	20	22 64		8 50 47				
11	344	52.2	-23	21.3	128	36.9	63	+19	12.9	129	10 N	17 47	18 10	18 36	20 36	59	8 34 52				
12	359	51.9	-23	21.2	143	02.4	65	+18	59.9	130	0	18 04	18 27	18 53	20 48	55	8 19 56				
13	14	51.6		21.1	157	28.0	66		46.8	131	10 S	22	18 45	19 12	21 01	50	8 03 62				
14	29	51.3		21.0	171	53.7	67		33.6	132	20	18 41	19 05	19 35	15 44		7 47 67				
15	44	51.0		20.9	186	19.5	68		20.3	133	30	19 03	30	20 04	30 39		28 73				
16	59	50.7		20.8	200	45.5	70	+18	06.9	134	35	16	19 45	22	39 35		17 76				
17	74	50.4	-23	20.7	215	11.6	71	+17	53.4	135	40	19 31	20 04	20 45	21 50	31	7 04 80				
18	89	50.1	-23	20.6	229	37.9	73	+17	39.8	136	45	19 49	20 26	21 16	22 01	27	6 49 85				
19	104	49.8		20.6	244	04.3	74		26.2	136	50	20 11	20 56	22 01	16 21		30 92				
20	119	49.5		20.5	258	30.8	75	+17	12.4	138	52	22	21 11	22 28	22 19		21 95				
21	134	49.2		20.4	272	57.4	76	+16	58.5	139	54	34	29	23 14	30 15		11 98				
22	149	48.9		20.3	287	24.2	78		44.5	140	56	20 48	21 51	** **	38 12		6 00 102				
23	164	48.5		20.2	301	51.0	78		30.5	140	58	21 05	22 20	** **	47 8		5 46 108				
24	179	48.2	-23	20.1	316	18.1	81	+16	16.3	142	60 S	21 25	23 09	** **	22 58	3	5 31 113				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG 17 ^h 39.1 ^m			Mag: -4.6 PMG: 8 ^h 46 ^m			Mag: -0.1 PMG: 4 ^h 28 ^m			Mag: -2.4 PMG: 3 ^h 38 ^m			Mag: +0.7 PMG: 18 ^h 13 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	94	30.7	228	23.2	-13	55.5	292	44.8	+11	02.5	305	13.3	+13	26.9	86	03.5	+0	56.8			
1	109	33.1	243	23.3		56.1	307	46.9		02.4	320	15.8		26.9	101	05.9		56.8			
2	124	35.6	258	23.4		56.7	322	48.9		02.3	335	18.4		27.0	116	08.3		56.9			
3	139	38.0	273	23.5		57.3	337	50.9		02.2	350	21.0		27.0	131	10.8		56.9			
4	154	40.5	288	23.6		57.9	352	52.9		02.1	5	23.5		27.0	146	13.2		56.9			
5	169	43.0	303	23.7	-13	58.5	7	54.9	+11	02.0	20	26.1	+13	27.1	161	15.6	+0	57.0			
6	184	45.4	318	23.8	-13	59.1	22	56.9	+11	01.9	35	28.6	+13	27.1	176	18.0	+0	57.0			
7	199	47.9	333	23.8	-13	59.7	37	59.0		01.9	50	31.2		27.2	191	20.4		57.1			
8	214	50.4	348	23.9	-14	00.3	53	01.0		01.8	65	33.8		27.2	206	22.8		57.1			
9	229	52.8	3	24.0		00.9	68	03.0		01.7	80	36.3		27.3	221	25.2		57.1			
10	244	55.3	18	24.1		01.5	83	05.0		01.6	95	38.9		27.3	236	27.6		57.2			
11	259	57.8	33	24.2	-14	02.1	98	07.1	+11	01.5	110	41.5	+13	27.4	251	30.0	+0	57.2			
12	275	00.2	48	24.3	-14	02.7	113	09.1	+11	01.4	125	44.0	+13	27.4	266	32.4	+0	57.2			
13	290	02.7	63	24.4		03.3	128	11.1		01.3	140	46.6		27.5	281	34.8		57.3			
14	305	05.2	78	24.5		03.9	143	13.1		01.3	155	49.2		27.5	296	37.2		57.3			
15	320	07.6	93	24.6		04.5	158	15.2		01.2	170	51.7		27.6	311	39.6		57.4			
16	335	10.1	108	24.6		05.1	173	17.2		01.1	185	54.3		27.6	326	42.0		57.4			
17	350	12.5	123	24.7	-14	05.7	188	19.2	+11	01.0	200	56.9	+13	27.7	341	44.4	+0	57.4			
18	5	15.0	138	24.8	-14	06.3	203	21.3	+11	00.9	215	59.4	+13	27.7	356	46.8	+0	57.5			
19	20	17.5	153	24.9		06.9	218	23.3		00.8	231	02.0		27.7	11	49.2		57.5			
20	35	19.9	168	25.0		07.5	233	25.3		00.8	246	04.6		27.8	26	51.6		57.5			
21	50	22.4	183	25.0		08.1	248	27.4		00.7	261	07.1		27.8	41	54.0		57.6			
22	65	24.9	198	25.1		08.7	263	29.4		00.6	276	09.7		27.9	56	56.4		57.6			
23	80	27.3	213	25.2		09.3	278	31.4		00.5	291	12.3		27.9	71	58.8		57.7			
24	95	29.8	228	25.3	-14	09.9	293	33.5	+11	00.4	306	14.8	+13	28.0	87	01.2	+0	57.7			
Dif	—			+1			-6			+20			-1			+26			0		
	—			+1			-6			+20			-1			+24			0		

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG:12 ^h 01.0 ^m			Edad: 18.0 ^d SD: 16'4 PMG: 3 ^h 01 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	179	48.2	-23	20.1	316	18.1	+16	16.3	60 N	7	09	8	06	9	04	20	19	99
1	194	47.9		20.0	330	45.2	81	+16	02.1	58	7	02	7	54	8	46	25	95
2	209	47.6		19.9	345	12.5	83	+15	47.8	56	6	55		44	32	31	92	41
3	224	47.3		19.8	359	39.8	83		33.4	54		49		35	19	36	89	35
4	239	47.0		19.7	14	07.4	86		19.0	52		43		27	8	08	41	85
5	254	46.7	-23	19.6	28	35.0	86	+15	04.4	50	6	38	7	20	7	58	20	45
6	269	46.4	-23	19.4	43	02.7	87	+14	49.8	45	6	26	7	04	7	37	20	55
7	284	46.1		19.3	57	30.6	89		35.2	40		16	6	50	21	02	72	10
8	299	45.8		19.2	71	58.6	90		20.4	35	6	07		38	7	07	09	68
9	314	45.5		19.1	86	26.7	91	+14	05.6	30	5	58		28	6	54	15	64
10	329	45.2		19.0	100	54.9	92	+13	50.8	20		42	6	09	33	25	58	36
11	344	44.9	-23	18.9	115	23.3	94	+13	35.9	10 N	5	25	5	52	6	15	21	33
12	359	44.6	-23	18.8	129	51.7	94	+13	20.9	0	5	09	5	35	5	57	21	41
13	14	44.3		18.7	144	20.3	96	+13	05.8	10 S	4	50	5	17	40	49	44	9
14	29	43.9		18.6	158	49.0	97	+12	50.7	20	4	27	4	56	5	21	21	58
15	44	43.6		18.5	173	17.7	97		35.6	30	3	58		31	4	59	22	07
16	59	43.3		18.4	187	46.6	99		20.4	35		40	4	16	46	13	29	32
17	74	43.0	-23	18.2	202	15.7	101	+12	05.2	40	3	16	3	58	4	31	22	19
18	89	42.7	-23	18.1	216	44.8	101	+11	49.9	45	2	46	3	36	4	13	22	27
19	104	42.4		18.0	231	14.0	102		34.5	50	2	01	3	06	3	51	35	16
20	119	42.1		17.9	245	43.3	103		19.1	52	1	33	2	51	40	39	14	7
21	134	41.8		17.8	260	12.7	104	+11	03.7	54	0	48		33	27	44	10	48
22	149	41.5		17.7	274	42.3	106	+10	48.3	56	**	**	2	11	3	13	48	8
23	164	41.2		17.5	289	11.9	106		32.8	58	**	**	1	41	2	57	22	54
24	179	40.9	-23	17.4	303	41.6	107	+10	17.2	60 S	**	**	0	52	2	36	23	00

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: -4.6 17 ^h 35.1 ^m		Mag: -4.6 PMG: 8 ^h 46 ^m		Mag: -0.1 PMG: 4 ^h 25 ^m		Mag: -2.4 PMG: 3 ^h 34 ^m		Mag: +0.7 PMG: 18 ^h 09 ^m										
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	95	29.8	228	25.3	-14	09.9	293	33.5	+11	00.4	306	14.8	+13	28.0	87	01.2	+0	57.7	
1	110	32.3	243	25.3		10.5	308	35.5		00.4	321	17.4		28.0	102	03.6		57.7	
2	125	34.7	258	25.4		11.1	323	37.5		00.3	336	20.0		28.1	117	06.0		57.8	
3	140	37.2	273	25.5		11.7	338	39.6		00.2	351	22.6		28.1	132	08.4		57.8	
4	155	39.7	288	25.6		12.3	353	41.6	+11	00.1	6	25.1		28.2	147	10.8		57.9	
5	170	42.1	303	25.6	-14	12.9	8	43.7	+11	00.0	21	27.7	+13	28.2	162	13.2	+0	57.9	
6	185	44.6	318	25.7	-14	13.5	23	45.7	+11	00.0	36	30.3	+13	28.3	177	15.6	+0	57.9	
7	200	47.0	333	25.8		14.1	38	47.8	+10	59.9	51	32.8		28.3	192	18.0		58.0	
8	215	49.5	348	25.8		14.7	53	49.8		59.8	66	35.4		28.4	207	20.4		58.0	
9	230	52.0	3	25.9		15.3	68	51.8		59.7	81	38.0		28.4	222	22.8		58.0	
10	245	54.4	18	26.0		15.9	83	53.9		59.6	96	40.6		28.5	237	25.2		58.1	
11	260	56.9	33	26.0	-14	16.5	98	55.9	+10	59.6	111	43.1	+13	28.5	252	27.6	+0	58.1	
12	275	59.4	48	26.1	-14	17.1	113	58.0	+10	59.5	126	45.7	+13	28.6	267	30.0	+0	58.2	
13	291	01.8	63	26.2		17.7	129	00.0		59.4	141	48.3		28.6	282	32.4		58.2	
14	306	04.3	78	26.2		18.3	144	02.1		59.3	156	50.9		28.7	297	34.8		58.2	
15	321	06.8	93	26.3		18.9	159	04.1		59.3	171	53.4		28.7	312	37.2		58.3	
16	336	09.2	108	26.3		19.5	174	06.2		59.2	186	56.0		28.8	327	39.6		58.3	
17	351	11.7	123	26.4	-14	20.1	189	08.3	+10	59.1	201	58.6	+13	28.8	342	42.0	+0	58.4	
18	6	14.2	138	26.4	-14	20.7	204	10.3	+10	59.1	217	01.2	+13	28.9	357	44.4	+0	58.4	
19	21	16.6	153	26.5		21.3	219	12.4		59.0	232	03.7		28.9	12	46.8		58.4	
20	36	19.1	168	26.6		21.9	234	14.4		58.9	247	06.3		29.0	27	49.2		58.5	
21	51	21.5	183	26.6		22.5	249	16.5		58.8	262	08.9		29.0	42	51.6		58.5	
22	66	24.0	198	26.7		23.1	264	18.5		58.8	277	11.5		29.1	57	54.0		58.6	
23	81	26.5	213	26.7		23.7	279	20.6		58.7	292	14.0		29.1	72	56.4		58.6	
24	96	28.9	228	26.8	-14	24.3	294	22.7	+10	58.6	307	16.6	+13	29.2	87	58.8	+0	58.6	
Dif	—		+1		-6		+20		-1		+26		0		+24		0		

UT	SOL		LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG:12 ^h 01.5 ^m		Edad: 19.0 ^d SD: 16'2 PMG: 3 ^h 53 ^m PHE { 4 ^h : 59'4 12 ^h : 59'1 20 ^h : 58'8 R°: 49 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m	m	h m	m
0	179 40.9	-23 17.4	303 41.6		+10 17.2		60 N	15 00	15 57	16 54	21 58	95	10 58	2
1	194 40.6	17.3	318 11.4	108	+10 01.7	155	58	17	16 09	17 01	22 00	92	54	6
2	209 40.3	17.2	332 41.3	109	+9 46.1	156	56	32	19	08	03	88	50	9
3	224 40.0	17.1	347 11.4	111		30.4	54	44	28	14	05	85	47	12
4	239 39.7	16.9	1 41.5	111	+9 14.8	156	52	15 55	36	20	06	83	44	14
5	254 39.4	-23 16.8	16 11.7	112	+8 59.1	157	50	16 05	16 43	17 25	22 08	80	10 42	16
6	269 39.1	-23 16.7	30 42.0	113	+8 43.4	157	45	16 25	16 59	17 36	22 12	74	10 36	21
7	284 38.8	16.6	45 12.3	113		27.6	40	42	17 13	47	14	71	31	26
8	299 38.4	16.4	59 42.8	115	+8 11.9	157	35	16 56	24	17 56	17	66	26	30
9	314 38.1	16.3	74 13.4	116	+7 56.1	158	30	17 08	35	18 05	19	63	23	33
10	329 37.8	16.2	88 44.0	116		40.3	20	30	17 54	21	23	57	16	39
11	344 37.5	-23 16.1	103 14.7	117	+7 24.5	158	10 N	17 48	18 11	18 37	22 26	52	10 10	44
12	359 37.2	-23 15.9	117 45.5	118	+7 08.6	159	0	18 05	18 28	18 54	22 30	47	10 05	48
13	14 36.9	15.8	132 16.4	119	+6 52.8	158	10 S	23	18 46	19 13	33	42	9 59	53
14	29 36.6	15.7	146 47.4	120		36.9	20	18 42	19 06	19 35	36	38	53	58
15	44 36.3	15.5	161 18.4	120		21.1	30	19 03	31	20 04	40	32	46	64
16	59 36.0	15.4	175 49.5	121	+6 05.2	159	35	16	19 46	23	42	29	42	68
17	74 35.7	-23 15.3	190 20.7	122	+5 49.3	159	40	19 31	20 04	20 46	22 45	25	9 37	72
18	89 35.4	-23 15.1	204 52.0	123	+5 33.4	159	45	19 49	20 26	21 16	22 48	20	9 32	76
19	104 35.1	15.0	219 23.3	123		17.5	50	20 11	20 56	22 01	51	16	25	82
20	119 34.8	14.9	233 54.7	124	+5 01.6	159	52	22	21 11	22 28	53	13	22	85
21	134 34.5	14.7	248 26.2	125	+4 45.7	159	54	34	28	23 11	54	11	19	87
22	149 34.2	14.6	262 57.7	125		29.8	56	20 48	21 50	** **	56	8	15	91
23	164 33.9	14.4	277 29.3	126	+4 13.9	159	58	21 05	22 19	** **	22 58	6	11	94
24	179 33.6	-23 14.3	292 01.0	127	+3 58.0	159	60 S	21 25	23 07	** **	23 01	1	9 06	98

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 31.2 ^m		Mag: -4.6 PMG: 8 ^h 46 ^m		Mag: -0.1 PMG: 4 ^h 22 ^m		Mag: -2.4 PMG: 3 ^h 30 ^m		Mag: +0.7 PMG: 18 ^h 05 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	96 28.9	228 26.8	-14 24.3		294 22.7	+10 58.6	307 16.6	+13 29.2	87 58.8	+0 58.6
1	111 31.4	243 26.8	24.9		309 24.7	58.6	322 19.2	29.2	103 01.2	58.7
2	126 33.9	258 26.9	25.5		324 26.8	58.5	337 21.8	29.3	118 03.6	58.7
3	141 36.3	273 26.9	26.1		339 28.9	58.4	352 24.3	29.3	133 06.0	58.8
4	156 38.8	288 26.9	26.7		354 30.9	58.3	7 26.9	29.4	148 08.4	58.8
5	171 41.3	303 27.0	-14 27.3		9 33.0	+10 58.3	22 29.5	+13 29.4	163 10.8	+0 58.8
6	186 43.7	318 27.0	-14 27.9		24 35.0	+10 58.2	37 32.1	+13 29.5	178 13.2	+0 58.9
7	201 46.2	333 27.1	28.5		39 37.1	58.1	52 34.7	29.5	193 15.6	58.9
8	216 48.6	348 27.1	29.1		54 39.2	58.1	67 37.2	29.6	208 18.0	59.0
9	231 51.1	3 27.2	29.7		69 41.3	58.0	82 39.8	29.6	223 20.4	59.0
10	246 53.6	18 27.2	30.3		84 43.3	57.9	97 42.4	29.7	238 22.8	59.0
11	261 56.0	33 27.2	-14 30.9		99 45.4	+10 57.9	112 45.0	+13 29.7	253 25.2	+0 59.1
12	276 58.5	48 27.3	-14 31.5		114 47.5	+10 57.8	127 47.6	+13 29.8	268 27.6	+0 59.1
13	292 01.0	63 27.3	32.1		129 49.5	57.7	142 50.1	29.8	283 30.0	59.2
14	307 03.4	78 27.3	32.7		144 51.6	57.7	157 52.7	29.9	298 32.4	59.2
15	322 05.9	93 27.4	33.3		159 53.7	57.6	172 55.3	29.9	313 34.8	59.2
16	337 08.4	108 27.4	33.9		174 55.8	57.5	187 57.9	30.0	328 37.2	59.3
17	352 10.8	123 27.4	-14 34.5		189 57.9	+10 57.5	203 00.5	+13 30.1	343 39.6	+0 59.3
18	7 13.3	138 27.5	-14 35.1		204 59.9	+10 57.4	218 03.1	+13 30.1	358 41.9	+0 59.4
19	22 15.8	153 27.5	35.7		220 02.0	57.4	233 05.6	30.2	13 44.3	59.4
20	37 18.2	168 27.5	36.3		235 04.1	57.3	248 08.2	30.2	28 46.7	59.4
21	52 20.7	183 27.6	36.9		250 06.2	57.2	263 10.8	30.3	43 49.1	59.5
22	67 23.1	198 27.6	37.5		265 08.3	57.2	278 13.4	30.3	58 51.5	59.5
23	82 25.6	213 27.6	38.1		280 10.3	57.1	293 16.0	30.4	73 53.9	59.6
24	97 28.1	228 27.6	-14 38.7		295 12.4	+10 57.0	308 18.6	+13 30.4	88 56.3	+0 59.6
Dif	—	0	-6		+21	-1	+26	+1	+24	0

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG:12 ^h 02.0 ^m			Edad: 20.0 ^d SD: 16'0 PMG: 4 ^h 41 ^m PHE 4^h: 58'4 12^h: 58'1 20^h: 57'8 R°: 45^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	33.6	-23	14.3	292	01.0	+3	58.0	60 N	7	09	8	06	9	03	23	32
1	194	33.3		14.2	306	32.7		42.1	58	7	02	7	55	8	46	30	88
2	209	33.0		14.0	321	04.5		26.2	56	6	55		44	32	29	84	58
3	224	32.7		13.9	335	36.4	+3	10.3	54		49		35	19	28	81	57
4	239	32.4		13.7	350	08.3	+2	54.4	52		44		27	8	08	27	79
5	254	32.1	-23	13.6	4	40.3	+2	38.5	50	6	39	7	20	7	58	23	26
6	269	31.8	-23	13.5	19	12.3	+2	22.7	45	6	27	7	04	7	38	23	25
7	284	31.4		13.3	33	44.4	+2	06.8	40		17	6	51	21	23	67	55
8	299	31.1		13.2	48	16.5	+1	51.0	35	6	07		39	7	07	22	63
9	314	30.8		13.0	62	48.7		35.2	30	5	59		29	6	55	21	59
10	329	30.5		12.9	77	20.9		19.3	20		42	6	10	34	19	54	54
11	344	30.2	-23	12.7	91	53.2	+1	03.6	10 N	5	26	5	53	6	16	23	17
12	359	29.9	-23	12.6	106	25.6	+0	47.8	0	5	10	5	58	5	58	23	15
13	14	29.6		12.4	120	57.9		32.0	10 S	4	51	5	18	41	14	40	51
14	29	29.3		12.3	135	30.4		16.3	20	4	28	4	57	22	12	35	50
15	44	29.0		12.1	150	02.8	+0	00.5	30	3	59		33	5	00	10	30
16	59	28.7		12.0	164	35.3	-0	15.2	35		41		18	4	47	09	27
17	74	28.4	-23	11.8	179	07.9	-0	30.8	40	3	18	4	00	4	32	23	08
18	89	28.1	-23	11.7	193	40.5	-0	46.5	45	2	48	3	37	4	14	23	07
19	104	27.8		11.5	208	13.1	-1	02.1	50	2	03	3	08	3	52	05	15
20	119	27.5		11.4	222	45.7		17.7	52	1	36	2	53	41	05	12	45
21	134	27.2		11.2	237	18.4		33.3	54	0	52		35	29	04	9	45
22	149	26.9		11.1	251	51.2	-1	48.8	56	**	**	2	13	3	15	03	7
23	164	26.6		10.9	266	23.9	-2	04.4	58	**	**	1	44	2	59	02	4
24	179	26.3	-23	10.7	280	56.7	-2	19.9	60 S	**	**	0	57	2	39	23	01

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 17 ^h 27.3 ^m		Mag: -4.6 PMG: 8 ^h 46 ^m			Mag: -0.1 PMG: 4 ^h 19 ^m			Mag: -2.4 PMG: 3 ^h 26 ^m			Mag: +0.7 PMG: 18 ^h 01 ^m		
	hG ♂		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	97	28.1	228	27.6	-14	38.7	295	12.4	+10	57.0	308	18.6	+13	30.4
1	112	30.5	243	27.7		39.3	310	14.5		57.0	323	21.1		30.5
2	127	33.0	258	27.7		39.9	325	16.6		56.9	338	23.7		30.5
3	142	35.5	273	27.7		40.5	340	18.7		56.9	353	26.3		30.6
4	157	37.9	288	27.7		41.1	355	20.8		56.8	8	28.9		30.6
5	172	40.4	303	27.7	-14	41.7	10	22.9	+10	56.8	23	31.5	+13	30.7
6	187	42.9	318	27.8	-14	42.3	25	25.0	+10	56.7	38	34.1	+13	30.7
7	202	45.3	333	27.8		43.0	40	27.1		56.6	53	36.7		30.8
8	217	47.8	348	27.8		43.6	55	29.2		56.6	68	39.2		30.9
9	232	50.3	3	27.8		44.2	70	31.2		56.5	83	41.8		30.9
10	247	52.7	18	27.8		44.8	85	33.3		56.5	98	44.4		31.0
11	262	55.2	33	27.8	-14	45.4	100	35.4	+10	56.4	113	47.0	+13	31.0
12	277	57.6	48	27.8	-14	46.0	115	37.5	+10	56.4	128	49.6	+13	31.1
13	293	00.1	63	27.9		46.6	130	39.6		56.3	143	52.2		31.1
14	308	02.6	78	27.9		47.2	145	41.7		56.2	158	54.8		31.2
15	323	05.0	93	27.9		47.8	160	43.8		56.2	173	57.4		31.2
16	338	07.5	108	27.9		48.4	175	45.9		56.1	189	00.0		31.3
17	353	10.0	123	27.9	-14	49.0	190	48.0	+10	56.1	204	02.5	+13	31.3
18	8	12.4	138	27.9	-14	49.6	205	50.1	+10	56.0	219	05.1	+13	31.4
19	23	14.9	153	27.9		50.2	220	52.3		56.0	234	07.7		31.5
20	38	17.4	168	27.9		50.8	235	54.4		55.9	249	10.3		31.5
21	53	19.8	183	27.9		51.4	250	56.5		55.9	264	12.9		31.6
22	68	22.3	198	27.9		52.0	265	58.6		55.8	279	15.5		31.6
23	83	24.7	213	27.9		52.6	281	00.7		55.8	294	18.1		31.7
24	98	27.2	228	27.9	-14	53.2	296	02.8	+10	55.7	309	20.7	+13	31.7
Dif	—		0	-6			+21	-1			+26	+1		+24

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16 ^h 3 PMG: 12 ^h 02.5 ^m				Edad: 21.0 ^d SD: 15 ^h 7 PMG: 5 ^h 26 ^m PHE { 4 ^h : 57/5 12 ^h : 57/2 20 ^h : 56/9 Rº: 46 ^m																
	hG ☉	Dec			hG ☾	Dif			Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	179	26.3	-23	10.7	280	56.7	-2	19.9	60 N	15	02	15	59	16	56	**	**	**	10	59	2
1	194	26.0		10.6	295	29.5		35.3	58	19	16	11	17	03	**	**	**	11	02	6	
2	209	25.7		10.4	310	02.4	-2	50.7	56	34	21		10	**	**	**	**	05	8		
3	224	25.4		10.3	324	35.2	-3	06.1	54	46	30		16	**	**	**	**	07	14		
4	239	25.1		10.1	339	08.1		21.5	52	15	57	38	21	**	**	**	**	09	14		
5	254	24.8	-23	09.9	353	41.1	-3	36.8	50	16	07	16	45	17	26	**	**	**	11	11	16
6	269	24.5	-23	09.8	8	14.0	-3	52.1	45	16	27	17	01	17	38	**	**	**	11	15	21
7	284	24.2		09.6	22	47.0	-4	07.3	40	44		14	48	**	**	**	**	18	25		
8	299	23.9		09.4	37	19.9		22.6	35	16	58	26	17	57	**	**	**	21	29		
9	314	23.6		09.3	51	53.0		37.7	30	17	10	36	18	06	**	**	**	24	31		
10	329	23.3		09.1	66	26.0	-4	52.9	20	31	17	55	22	**	**	**	**	29	36		
11	344	23.0	-23	08.9	80	59.0	-5	07.9	10 N	17	49	18	12	18	38	**	**	**	11	33	41
12	359	22.7	-23	08.8	95	32.1	-5	23.0	0	18	06	18	29	18	55	**	**	**	11	37	45
13	14	22.4		08.6	110	05.1		38.0	10 S	24	18	47	19	14	23	54	41	41	50		
14	29	22.1		08.4	124	38.2	-5	53.0	20	18	42	19	07	19	36	47	37	45	55		
15	44	21.8		08.3	139	11.3	-6	07.9	30	19	04	31	20	05	40	32	49	61			
16	59	21.5		08.1	153	44.4		22.8	35	17	19	46	23	36	29	52	64				
17	74	21.2	-23	07.9	168	17.5	-6	37.6	40	19	32	20	04	20	46	23	31	26	11	55	67
18	89	20.9	-23	07.7	182	50.6	-6	52.4	45	19	49	20	27	21	16	23	26	21	11	59	71
19	104	20.6		07.6	197	23.7	-7	07.1	50	20	12	20	56	22	00	20	16	12	03	77	
20	119	20.3		07.4	211	56.9		21.8	52	22	21	11	22	27	17	14	05	79			
21	134	20.0		07.2	226	30.0		36.4	54	34		28	23	08	13	12	07	82			
22	149	19.7		07.0	241	03.1	-7	51.0	56	20	48	21	50	**	**	10	9	10	85		
23	164	19.4		06.9	255	36.3	-8	05.5	58	21	05	22	18	**	**	06	6	12	89		
24	179	19.1	-23	06.7	270	09.4	-8	20.0	60 S	21	24	23	03	**	**	23	02	2	12	15	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 17 ^h 23.3 ^m		Mag: -4.6 PMG: 8 ^h 46 ^m		Mag: -0.2 PMG: 4 ^h 15 ^m		Mag: -2.4 PMG: 3 ^h 22 ^m		Mag: +0.7 PMG: 17 ^h 58 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	98	27.2	228	27.9	-14	53.2	296	02.8	+10	55.7	309	20.7	+13	31.7	89	53.7	+1	00.6
1	113	29.7	243	27.9		53.8	311	04.9		55.7	324	23.3		31.8	104	56.1		00.7
2	128	32.1	258	27.9		54.4	326	07.0		55.6	339	25.9		31.9	119	58.5		00.7
3	143	34.6	273	27.9		55.0	341	09.1		55.6	354	28.5		31.9	135	00.9		00.8
4	158	37.1	288	27.9		55.6	356	11.2		55.5	9	31.1		32.0	150	03.3		00.8
5	173	39.5	303	27.9	-14	56.2	11	13.4	+10	55.5	24	33.7	+13	32.0	165	05.7	+1	00.9
6	188	42.0	318	27.9	-14	56.8	26	15.5	+10	55.4	39	36.2	+13	32.1	180	08.0	+1	00.9
7	203	44.5	333	27.9		57.4	41	17.6		55.4	54	38.8		32.1	195	10.4		00.9
8	218	46.9	348	27.9		58.0	56	19.7		55.3	69	41.4		32.2	210	12.8		01.0
9	233	49.4	3	27.9		58.6	71	21.8		55.3	84	44.0		32.2	225	15.2		01.0
10	248	51.9	18	27.9		59.2	86	24.0		55.2	99	46.6		32.3	240	17.6		01.1
11	263	54.3	33	27.8	-14	59.8	101	26.1	+10	55.2	114	49.2	+13	32.4	255	20.0	+1	01.1
12	278	56.8	48	27.8	-15	00.4	116	28.2	+10	55.2	129	51.8	+13	32.4	270	22.4	+1	01.2
13	293	59.2	63	27.8		01.0	131	30.3		55.1	144	54.4		32.5	285	24.8		01.2
14	309	01.7	78	27.8		01.6	146	32.4		55.1	159	57.0		32.5	300	27.1		01.2
15	324	04.2	93	27.8		02.2	161	34.6		55.0	174	59.6		32.6	315	29.5		01.3
16	339	06.6	108	27.8		02.8	176	36.7		55.0	190	02.2		32.6	330	31.9		01.3
17	354	09.1	123	27.8	-15	03.4	191	38.8	+10	54.9	205	04.8	+13	32.7	345	34.3	+1	01.4
18	9	11.6	138	27.7	-15	04.0	206	41.0	+10	54.9	220	07.4	+13	32.8	0	36.7	+1	01.4
19	24	14.0	153	27.7		04.6	221	43.1		54.9	235	10.0		32.8	15	39.1		01.5
20	39	16.5	168	27.7		05.2	236	45.2		54.8	250	12.6		32.9	30	41.5		01.5
21	54	19.0	183	27.7		05.8	251	47.4		54.8	265	15.2		32.9	45	43.9		01.6
22	69	21.4	198	27.7		06.4	266	49.5		54.7	280	17.8		33.0	60	46.2		01.6
23	84	23.9	213	27.6		07.0	281	51.6		54.7	295	20.4		33.1	75	48.6		01.7
24	99	26.4	228	27.6	-15	07.6	296	53.8	+10	54.6	310	23.0	+13	33.1	90	51.0	+1	01.7
Dif	—		0		-6		+21		0		+26		+1		+24			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG:12 ^h 03.0 ^m			Edad: 22.0 ^d SD: 15'5 PMG: 6 ^h 10 ^m PHE { 4 ^h : 56'6 12 ^h : 56'4 20 ^h : 56'1 R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m		
0	179	19.1	-23	06.7	270	09.4	-8	20.0	60 N	7 09	8 06	9 03	1 03	91	11 00	1		
1	194	18.8		06.5	284	42.5		34.4	58	7 02	7 54	8 46	0 58	86	06	5		
2	209	18.5		06.3	299	15.7	-8	48.8	56	6 56	44	31	53	83	12	8		
3	224	18.2		06.2	313	48.8	-9	03.1	54		50	36	19	49	80	17	1	
4	239	17.9		06.0	328	21.9		17.3	52		44	28	8 08	46	77	21	14	
5	254	17.6	-23	05.8	342	55.1	-9	31.5	50	6 39	7 20	7 59	0 42	75	11 25	17		
6	269	17.3	-23	05.6	357	28.2	-9	45.7	45	6 27	7 04	7 38	0 35	70	11 34	22		
7	284	17.0		05.4	12	01.3	-9	59.8	40		17	6 51	22	30	65	42	25	
8	299	16.7		05.2	26	34.4	-10	13.8	35	6 08	40	7 08	25	61	48	29		
9	314	16.4		05.1	41	07.5		27.8	30	5 59	29	6 56	20	59	11 54	32		
10	329	16.1		04.9	55	40.6		41.7	20		43	6 11	35	13	53	12	04	
11	344	15.8	-23	04.7	70	13.6	-10	55.5	10 N	5 27	5 54	6 16	0 06	49	12 13	41		
12	359	15.5	-23	04.5	84	46.7	-11	09.3	0	5 11	5 37	5 59	0 00	44	12 21	45		
13	14	15.2		04.3	99	19.7		23.0	10 S	4 52	5 19	42	**	**	**	29	49	
14	29	14.9		04.1	113	52.8		36.7	20		30	4 59	23	**	**	**	38	54
15	44	14.6		03.9	128	25.8	-11	50.2	30	4 01	34	5 01	**	**	**	48	59	
16	59	14.3		03.7	142	58.8	-12	03.8	35	3 43	19	4 49	**	**	**	12	54	
17	74	14.0	-23	03.6	157	31.8	-12	17.2	40	3 20	4 01	4 34	23	55	27	13	01	
18	89	13.7	-23	03.4	172	04.7	-12	30.6	45	2 50	3 39	4 16	23	46	23	13	09	
19	104	13.4		03.2	186	37.7		43.9	50	2 05	3 10	3 54	35	18		18	75	
20	119	13.1		03.0	201	10.6	-12	57.2	52	1 39	2 55	43	30	15		23	77	
21	134	12.8		02.8	215	43.5	-13	10.4	54	0 57	38	31	24	13		28	79	
22	149	12.5		02.6	230	16.4		23.5	56	**	**	2 16	17	9		33	83	
23	164	12.2		02.4	244	49.2		36.5	58	**	**	1 48	3 01	11	6	39	87	
24	179	11.9	-23	02.2	259	22.1	-13	49.5	60 S	**	**	1 02	2 41	23	03	2	13	46

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 19.4 ^m		Mag: -4.6 PMG: 8 ^h 46 ^m		Mag: -0.2 PMG: 4 ^h 12 ^m		Mag: -2.4 PMG: 3 ^h 18 ^m		Mag: +0.7 PMG: 17 ^h 54 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	99	26.4	228	27.6	-15	07.6	296	53.8	+10	54.6	310	23.0	+13	33.1	90	51.0	+1	01.7
1	114	28.8	243	27.6		08.2	311	55.9		54.6	325	25.6		33.2	105	53.4		01.7
2	129	31.3	258	27.6		08.8	326	58.0		54.6	340	28.2		33.2	120	55.8		01.8
3	144	33.7	273	27.5		09.4	342	00.2		54.5	355	30.8		33.3	135	58.2		01.8
4	159	36.2	288	27.5		10.0	357	02.3		54.5	10	33.4		33.3	151	00.6		01.9
5	174	38.7	303	27.5	-15	10.6	12	04.4	+10	54.5	25	36.0	+13	33.4	166	02.9	+1	01.9
6	189	41.1	318	27.4	-15	11.2	27	06.6	+10	54.4	40	38.6	+13	33.5	181	05.3	+1	02.0
7	204	43.6	333	27.4		11.8	42	08.7		54.4	55	41.2		33.5	196	07.7		02.0
8	219	46.1	348	27.4		12.4	57	10.9		54.3	70	43.8		33.6	211	10.1		02.1
9	234	48.5	3	27.3		13.0	72	13.0		54.3	85	46.4		33.6	226	12.5		02.1
10	249	51.0	18	27.3		13.6	87	15.2		54.3	100	49.0		33.7	241	14.9		02.1
11	264	53.5	33	27.3	-15	14.2	102	17.3	+10	54.2	115	51.6	+13	33.8	256	17.2	+1	02.2
12	279	55.9	48	27.2	-15	14.8	117	19.5	+10	54.2	130	54.2	+13	33.8	271	19.6	+1	02.2
13	294	58.4	63	27.2		15.4	132	21.6		54.2	145	56.8		33.9	286	22.0		02.3
14	310	00.8	78	27.2		16.0	147	23.8		54.1	160	59.4		33.9	301	24.4		02.3
15	325	03.3	93	27.1		16.6	162	25.9		54.1	176	02.0		34.0	316	26.8		02.4
16	340	05.8	108	27.1		17.2	177	28.1		54.1	191	04.6		34.1	331	29.2		02.4
17	355	08.2	123	27.0	-15	17.8	192	30.2	+10	54.0	206	07.2	+13	34.1	346	31.5	+1	02.5
18	10	10.7	138	27.0	-15	18.4	207	32.4	+10	54.0	221	09.8	+13	34.2	1	33.9	+1	02.5
19	25	13.2	153	27.0		19.0	222	34.5		54.0	236	12.5		34.2	16	36.3		02.6
20	40	15.6	168	26.9		19.6	237	36.7		53.9	251	15.1		34.3	31	38.7		02.6
21	55	18.1	183	26.9		20.2	252	38.8		53.9	266	17.7		34.4	46	41.1		02.7
22	70	20.6	198	26.8		20.8	267	41.0		53.9	281	20.3		34.4	61	43.4		02.7
23	85	23.0	213	26.8		21.4	282	43.2		53.9	296	22.9		34.5	76	45.8		02.8
24	100	25.5	228	26.7	-15	22.0	297	45.3	+10	53.8	311	25.5	+13	34.5	91	48.2	+1	02.8
Dif	—		0		-6		+21		0		+26		+1		+24			

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG: 12 ^h 03.4 ^m				Edad: 23.0 ^d SD: 15/3 PMG: 6 ^h 55 ^m PHE { 4 ^h : 55/9 12 ^h : 55/7 20 ^h : 55/5 Rº: 47 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	179	11.9	-23	02.2	259	22.1	-13	49.5	60 N	15 05	16 02	16 58	2 34	93	11 01	5	5
1	194	11.6		02.0	273	54.9 ¹³⁸	-14	02.4 ¹²⁹	58	22	13	17 05	24	89	11	9	
2	209	11.3		01.8	288	27.6 ¹³⁷		15.2 ¹²⁸	56	36	23	12	16	85	20	13	
3	224	11.1		01.6	303	00.4 ¹³⁸		28.0 ¹²⁸	54	48	32	18	09	81	28	16	
4	239	10.8		01.4	317	33.1 ¹³⁷		40.6 ¹²⁶	52	15 59	40	23	2 03	78	35	19	
5	254	10.5	-23	01.2	332	05.8 ¹³⁷	-14	53.2 ¹²⁶	50	16 09	16 47	17 28	1 57	76	11 42	21	
6	269	10.2	-23	01.0	346	38.5 ¹³⁷	-15	05.8 ¹²⁶	45	16 29	17 02	17 40	1 45	70	11 56	25	
7	284	09.9		00.8	1	11.1 ¹³⁶		18.2 ¹²⁴	40	45	16	50	35	66	12 07	30	
8	299	09.6		00.6	15	43.8 ¹³⁷		30.6 ¹²⁴	35	16 59	27	17 59	26	63	17 33		
9	314	09.3		00.4	30	16.3 ¹³⁵		42.9 ¹²³	30	17 11	37	18 07	19	60	26	35	
10	329	09.0	-23	00.2	44	48.9 ¹³⁶	-15	55.1 ¹²²	20	32	17 56	23	1 06	55	40	41	
11	344	08.7	-23	00.0	59	21.4 ¹³⁵	-16	07.2 ¹²¹	10 N	17 50	18 13	18 39	0 55	51	12 54	44	
12	359	08.4	-22	59.8	73	53.9 ¹³⁵	-16	19.3 ¹²¹	0	18 07	18 30	18 56	0 44	47	13 06	48	
13	14	08.1		59.6	88	26.3 ¹³⁴		31.2 ¹¹⁹	10 S	24	18 47	19 14	34	43	18	52	
14	29	07.8		59.3	102	58.7 ¹³⁴		43.1 ¹¹⁹	20	18 43	19 07	19 37	23	39	32	55	
15	44	07.5		59.1	117	31.1 ¹³⁴	-16	54.9 ¹¹⁸	30	19 05	32	20 05	11	34	47	60	
16	59	07.2		58.9	132	03.5 ¹³⁴	-17	06.6 ¹¹⁷	35	17	19 47	23	0 03	32	13 56	63	
17	74	06.9	-22	58.7	146	35.8 ¹³³	-17	18.3 ¹¹⁷	40	19 32	20 05	20 46	** ** *	**	14 06	66	
18	89	06.6	-22	58.5	161	08.0 ¹³²	-17	29.8 ¹¹⁵	45	19 50	20 27	21 16	** ** *	**	14 18	70	
19	104	06.3		58.3	175	40.3 ¹³³		41.3 ¹¹⁵	50	20 12	20 55	21 59	23 53	23	33	75	
20	119	06.0		58.1	190	12.5 ¹³²	-17	52.6 ¹¹³	52	22	21 10	22 25	45	21	40	77	
21	134	05.7		57.9	204	44.6 ¹³¹	-18	03.9 ¹¹³	54	34	27	23 05	37	18	47	81	
22	149	05.4		57.7	219	16.7 ¹³¹		15.1 ¹¹²	56	20 48	21 48	** ** *	27	15	14 56	84	
23	164	05.2		57.4	233	48.8 ¹³¹		26.2 ¹¹¹	58	21 04	22 16	** ** *	17	11	15 06	88	
24	179	04.9	-22	57.2	248	20.9 ¹³¹	-18	37.2 ¹¹⁰	60 S	21 23	22 59	** ** *	23 05	6	15 17	93	

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 17 ^h 15.5 ^m			Mag: -4.6 PMG: 8 ^h 46 ^m			Mag: -0.2 PMG: 4 ^h 08 ^m			Mag: -2.4 PMG: 3 ^h 14 ^m			Mag: +0.7 PMG: 17 ^h 50 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	100	25.5	228	26.7	-15	22.0	297	45.3	+10	53.8	311	25.5	+13	34.5	91	48.2		
1	115	28.0	243	26.7		22.6	312	47.5		53.8	326	28.1		34.6	106	50.6		
2	130	30.4	258	26.6		23.2	327	49.7		53.8	341	30.7		34.7	121	53.0		
3	145	32.9	273	26.6		23.8	342	51.8		53.7	356	33.3		34.7	136	55.4		
4	160	35.3	288	26.5		24.4	357	54.0		53.7	11	35.9		34.8	151	57.7		
5	175	37.8	303	26.5	-15	25.0	12	56.2	+10	53.7	26	38.5	+13	34.9	167	00.1		
6	190	40.3	318	26.4	-15	25.6	27	58.3	+10	53.7	41	41.1	+13	34.9	182	02.5		
7	205	42.7	333	26.4		26.2	43	00.5		53.6	56	43.7		35.0	197	04.9		
8	220	45.2	348	26.3		26.8	58	02.7		53.6	71	46.4		35.0	212	07.3		
9	235	47.7	3	26.3		27.4	73	04.8		53.6	86	49.0		35.1	227	09.6		
10	250	50.1	18	26.2		28.0	88	07.0		53.6	101	51.6		35.2	242	12.0		
11	265	52.6	33	26.1	-15	28.6	103	09.2	+10	53.5	116	54.2	+13	35.2	257	14.4		
12	280	55.1	48	26.1	-15	29.2	118	11.3	+10	53.5	131	56.8	+13	35.3	272	16.8		
13	295	57.5	63	26.0		29.8	133	13.5		53.5	146	59.4		35.4	287	19.2		
14	311	00.0	78	26.0		30.4	148	15.7		53.5	162	02.0		35.4	302	21.5		
15	326	02.5	93	25.9		31.0	163	17.9		53.5	177	04.6		35.5	317	23.9		
16	341	04.9	108	25.8		31.6	178	20.1		53.4	192	07.2		35.5	332	26.3		
17	356	07.4	123	25.8	-15	32.2	193	22.2	+10	53.4	207	09.9	+13	35.6	347	28.7		
18	11	09.8	138	25.7	-15	32.8	208	24.4	+10	53.4	222	12.5	+13	35.7	2	31.1		
19	26	12.3	153	25.6		33.4	223	26.6		53.4	237	15.1		35.7	17	33.4		
20	41	14.8	168	25.6		34.0	238	28.8		53.3	252	17.7		35.8	32	35.8		
21	56	17.2	183	25.5		34.6	253	31.0		53.3	267	20.3		35.9	47	38.2		
22	71	19.7	198	25.4		35.2	268	33.2		53.3	282	22.9		35.9	62	40.6		
23	86	22.2	213	25.4		35.8	283	35.3		53.3	297	25.5		36.0	77	42.9		
24	101	24.6	228	25.3	-15	36.4	298	37.5	+10	53.3	312	28.2	+13	36.0	92	45.3		
Dif	—			-1			+22			0			+26			+1		
				-6			+24						+24					

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	'	'	'	'	'	'	'	'	'	'	'	'
1 - α And	<i>Alpheratz</i>	2.1	357	34.0	34.1	34.1	34.0	33.9	33.6	33.3	33.1	33.0	32.9	33.0	33.1
2 - β Cas	<i>Caph</i>	2.3	357	21.6	21.8	21.9	21.8	21.5	21.1	20.7	20.4	20.2	20.1	20.2	20.4
3 - γ Peg	<i>Algenib</i>	2.8	356	21.4	21.4	21.4	21.4	21.2	21.0	20.7	20.5	20.4	20.3	20.3	20.4
4 - α Phe	<i>Ankaa</i>	2.4	353	6.4	6.5	6.6	6.5	6.4	6.1	5.8	5.5	5.4	5.3	5.4	5.5
5 - α Cas	<i>Schedar</i>	2.2	349	30.2	30.4	30.5	30.4	30.2	29.8	29.5	29.1	28.9	28.8	28.9	29.0
6 - β Cet	<i>Diphda</i>	2.0	348	46.5	46.6	46.6	46.6	46.4	46.2	46.0	45.7	45.6	45.5	45.5	45.6
7 - γ Cas	<i>Navi</i>	2.4	345	25.7	25.9	26.1	26.0	25.8	25.4	25.0	24.6	24.3	24.2	24.2	24.4
8 - β And	<i>Mirach</i>	2.1	342	12.0	12.2	12.2	12.2	12.1	11.8	11.5	11.2	11.1	11.0	10.9	11.0
9 - α Eri	<i>Achernar</i>	0.5	335	19.5	19.8	19.9	20.0	19.9	19.6	19.3	18.9	18.7	18.5	18.5	18.7
10 - γ And	<i>Almak</i>	2.1	328	37.3	37.4	37.5	37.6	37.5	37.2	36.9	36.6	36.4	36.2	36.1	36.1
12 - α Ari	<i>Hamal</i>	2.0	327	50.2	50.3	50.4	50.4	50.3	50.1	49.8	49.6	49.4	49.2	49.1	49.2
11 - α UMi	<i>Polaris</i>	2.0	312	82.9	97.3	109.7	118.1	117.9	109.1	95.2	78.6	62.5	50.2	43.9	45.9
13 - θ Eri	<i>Acamar</i>	2.9	315	11.0	11.1	11.3	11.4	11.4	11.2	11.0	10.7	10.5	10.3	10.2	10.2
14 - α Cet	<i>Menkar</i>	2.5	314	5.1	5.2	5.3	5.4	5.3	5.2	5.0	4.7	4.5	4.3	4.2	4.2
15 - β Per	<i>Algol</i>	2.1	312	31.7	31.8	31.9	32.0	32.0	31.8	31.5	31.2	30.9	30.7	30.5	30.5
16 - α Per	<i>Mirfak</i>	1.8	308	26.8	26.9	27.1	27.2	27.2	27.0	26.7	26.3	26.0	25.7	25.6	25.5
17 - η Tau	<i>Alcyone</i>	2.9	302	44.1	44.2	44.4	44.4	44.4	44.3	44.1	43.8	43.6	43.4	43.2	43.1
18 - γ Eri	<i>Zaurak</i>	2.9	300	11.0	11.1	11.2	11.3	11.3	11.2	11.0	10.8	10.6	10.4	10.3	10.2
19 - α Tau	<i>Aldebaran</i>	0.9	290	38.4	38.5	38.6	38.7	38.7	38.6	38.4	38.2	37.9	37.7	37.5	37.4
20 - β Ori	<i>Rigel</i>	0.1	281	2.8	2.8	2.9	3.1	3.1	3.1	2.9	2.7	2.5	2.3	2.1	2.0
21 - α Aur	<i>Capella</i>	0.1	280	20.2	20.3	20.5	20.6	20.7	20.6	20.4	20.1	19.8	19.5	19.2	19.0
22 - γ Ori	<i>Bellatrix</i>	1.6	278	21.7	21.7	21.8	22.0	22.0	22.0	21.8	21.6	21.4	21.2	21.0	20.8
23 - β Tau	<i>Elnath</i>	1.7	277	60.5	60.5	60.6	60.8	60.8	60.8	60.6	60.4	60.1	59.9	59.6	59.5
24 - δ Ori	<i>Mintaka</i>	2.4	276	39.5	39.6	39.7	39.8	39.9	39.8	39.7	39.5	39.3	39.1	38.9	38.7
25 - ϵ Ori	<i>Alnilam</i>	1.7	275	36.6	36.6	36.7	36.8	36.9	36.9	36.7	36.5	36.3	36.1	35.9	35.8
26 - ζ Ori	<i>Alnitak</i>	1.8	274	28.5	28.5	28.7	28.8	28.8	28.8	28.7	28.5	28.3	28.1	27.8	27.7
27 - κ Ori	<i>Saiph</i>	2.1	272	44.7	44.8	44.9	45.0	45.1	45.1	44.9	44.8	44.5	44.3	44.1	44.0
28 - α Ori	<i>Betelgeuse</i>	0.4	270	50.8	50.9	51.0	51.1	51.2	51.1	51.0	50.8	50.6	50.4	50.2	50.0
29 - β Aur	<i>Menkalinan</i>	1.9	269	37.8	37.9	38.0	38.2	38.3	38.3	38.1	37.8	37.5	37.2	36.9	36.7
30 - β CMa	<i>Mirzam</i>	2.0	264	1.9	1.9	2.0	2.2	2.3	2.3	2.2	2.0	1.8	1.6	1.4	1.2
31 - α Car	<i>Canopus</i>	-0.7	263	51.5	51.6	51.8	52.1	52.3	52.4	52.4	52.2	51.9	51.6	51.3	51.1
32 - γ Gem	<i>Alhena</i>	1.9	260	11.3	11.3	11.4	11.5	11.6	11.6	11.5	11.4	11.1	10.9	10.7	10.5
33 - α CMa	<i>Sirius</i>	-1.5	258	25.1	25.2	25.3	25.4	25.5	25.5	25.3	25.1	24.9	24.7	24.5	
34 - ϵ CMa	<i>Adhara</i>	1.5	255	4.8	4.8	5.0	5.1	5.3	5.3	5.2	5.1	4.9	4.7	4.4	4.2
35 - δ CMa	<i>Wezen</i>	1.8	252	37.8	37.8	37.9	38.1	38.2	38.3	38.2	38.1	37.9	37.7	37.4	37.2
36 - η CMa	<i>Aludra</i>	2.5	248	42.7	42.7	42.8	43.0	43.1	43.2	43.1	43.0	42.8	42.6	42.3	42.1
37 - α Gem	<i>Castor</i>	1.6	245	55.6	55.6	55.7	55.8	55.9	55.9	55.9	55.7	55.5	55.3	55.0	54.7
38 - α CMi	<i>Procyon</i>	0.4	244	49.6	49.6	49.6	49.8	49.9	49.9	49.8	49.7	49.5	49.3	49.1	48.9
39 - β Gem	<i>Pollux</i>	1.1	243	15.9	15.8	15.9	16.0	16.2	16.2	16.1	16.0	15.8	15.6	15.3	15.0
40 - ζ Pup	<i>Naos</i>	2.3	238	52.1	52.0	52.2	52.3	52.5	52.6	52.6	52.5	52.4	52.1	51.8	51.6
41 - γ Vel	<i>Regor</i>	1.8	237	24.5	24.5	24.6	24.8	25.0	25.2	25.2	25.1	25.0	24.7	24.4	24.1
42 - ϵ Car	<i>Avior</i>	1.9	234	13.7	13.8	13.9	14.2	14.5	14.8	14.9	14.8	14.6	14.3	13.9	13.6
43 - δ Velorum		2.0	228	38.2	38.1	38.3	38.5	38.7	38.9	39.0	39.0	38.8	38.6	38.2	37.9
44 - ζ Hydrae		3.1	225	48.0	48.0	48.0	48.1	48.2	48.2	48.2	48.2	48.0	47.9	47.6	47.4
45 - λ Vel	<i>Suhail</i>	2.2	222	45.3	45.2	45.3	45.4	45.6	45.7	45.8	45.8	45.7	45.4	45.1	44.9
46 - β Car	<i>Miaplacidus</i>	1.7	221	37.2	37.2	37.4	37.8	38.2	38.6	38.9	39.0	38.8	38.4	37.8	37.3
47 - ι Car	<i>Aspidiske</i>	2.3	220	32.7	32.7	32.8	33.0	33.3	33.5	33.7	33.7	33.6	33.3	32.9	32.5
48 - α Lyn	<i>Elvashak</i>	3.1	219	19.9	19.8	19.8	19.9	20.1	20.1	20.2	20.1	20.0	19.8	19.5	19.2
49 - α Hyd	<i>Alphard</i>	2.0	217	46.6	46.5	46.5	46.6	46.7	46.8	46.8	46.8	46.7	46.5	46.3	46.0
50 - α Leo	<i>Regulus</i>	1.4	207	33.3	33.1	33.1	33.2	33.2	33.3	33.4	33.3	33.3	33.1	32.9	32.6

ESTRELLAS, 2026
Posiciones aparentes377
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	'	'	'	'	'	'	'	'	'	'	'	'
1 - α And	<i>Alpheratz</i>	2.1	+29	14.2	14.1	14.1	14.0	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.6
2 - β Cas	<i>Caph</i>	2.3	+59	17.9	17.8	17.7	17.6	17.5	17.5	17.6	17.7	17.9	18.1	18.2	18.3
3 - γ Peg	<i>Algenib</i>	2.8	+15	19.8	19.7	19.7	19.7	19.7	19.8	19.9	20.0	20.1	20.2	20.2	20.2
4 - α Phe	<i>Ankaa</i>	2.4	-42	10.1	10.0	9.9	9.8	9.6	9.5	9.4	9.4	9.4	9.5	9.6	9.7
5 - α Cas	<i>Schedar</i>	2.2	+56	41.1	41.0	40.9	40.8	40.7	40.7	40.8	40.9	41.1	41.2	41.4	41.5
6 - β Cet	<i>Diphda</i>	2.0	-17	50.7	50.7	50.7	50.6	50.5	50.4	50.3	50.2	50.2	50.2	50.3	50.3
7 - γ Cas	<i>Navi</i>	2.4	+60	51.8	51.7	51.6	51.5	51.4	51.4	51.4	51.5	51.7	51.9	52.0	52.1
8 - β And	<i>Mirach</i>	2.1	+35	45.7	45.7	45.6	45.5	45.5	45.5	45.6	45.7	45.8	45.9	46.0	46.1
9 - α Eri	<i>Achernar</i>	0.5	-57	6.5	6.5	6.4	6.2	6.0	5.9	5.7	5.7	5.8	5.9	6.1	6.2
10 - γ And	<i>Almak</i>	2.1	+42	27.5	27.5	27.4	27.3	27.2	27.2	27.3	27.4	27.5	27.6	27.7	27.8
12 - α Ari	<i>Hamal</i>	2.0	+23	35.2	35.2	35.2	35.1	35.1	35.2	35.2	35.3	35.4	35.5	35.5	35.6
11 - α UMi	<i>Polaris</i>	2.0	+89	22.7	22.8	22.7	22.6	22.4	22.3	22.2	22.3	22.3	22.5	22.7	22.8
13 - θ Eri	<i>Acamar</i>	2.9	-40	12.2	12.2	12.2	12.1	11.9	11.7	11.6	11.5	11.5	11.6	11.7	11.9
14 - α Cet	<i>Menkar</i>	2.5	+4	11.5	11.5	11.5	11.5	11.5	11.6	11.7	11.8	11.8	11.8	11.8	11.8
15 - β Per	<i>Algol</i>	2.1	+41	3.5	3.5	3.5	3.4	3.3	3.3	3.3	3.4	3.5	3.6	3.6	3.7
16 - α Per	<i>Mirfak</i>	1.8	+49	57.4	57.4	57.4	57.3	57.2	57.2	57.1	57.2	57.3	57.4	57.5	57.6
17 - η Tau	<i>Alcyone</i>	2.9	+24	11.2	11.2	11.2	11.2	11.1	11.1	11.2	11.2	11.3	11.3	11.4	11.4
18 - γ Eri	<i>Zaurak</i>	2.9	-13	26.1	26.2	26.2	26.1	26.1	25.9	25.8	25.7	25.7	25.7	25.8	25.9
19 - α Tau	<i>Aldebaran</i>	0.9	+16	33.7	33.7	33.7	33.7	33.7	33.7	33.8	33.8	33.8	33.9	33.9	33.8
20 - β Ori	<i>Rigel</i>	0.1	-8	10.3	10.4	10.4	10.4	10.3	10.3	10.2	10.1	10.0	10.1	10.1	10.2
21 - α Aur	<i>Capella</i>	0.1	+46	1.5	1.6	1.6	1.6	1.5	1.4	1.4	1.3	1.3	1.4	1.4	1.5
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	22.4	22.3	22.3	22.3	22.4	22.4	22.5	22.5	22.5	22.5	22.5	22.5
23 - β Tau	<i>Elnath</i>	1.7	+28	37.8	37.8	37.8	37.8	37.8	37.7	37.7	37.7	37.8	37.8	37.8	37.8
24 - δ Ori	<i>Mintaka</i>	2.4	-0	16.8	16.9	16.9	16.9	16.8	16.8	16.7	16.6	16.6	16.6	16.7	16.7
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	11.2	11.2	11.2	11.2	11.2	11.1	11.0	11.0	10.9	10.9	11.0	11.1
26 - ζ Ori	<i>Alnitak</i>	1.8	-1	55.8	55.8	55.8	55.8	55.8	55.7	55.6	55.6	55.5	55.6	55.6	55.7
27 - κ Ori	<i>Saiph</i>	2.1	-9	39.7	39.7	39.8	39.8	39.7	39.6	39.5	39.4	39.4	39.4	39.5	39.6
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.7	24.7	24.6	24.6	24.7	24.7	24.8	24.8	24.8	24.8	24.8	24.7
29 - β Aur	<i>Menkalinan</i>	1.9	+44	57.0	57.1	57.1	57.1	57.0	57.0	56.9	56.9	56.8	56.8	56.9	56.9
30 - β CMa	<i>Mirzam</i>	2.0	-17	58.2	58.3	58.3	58.3	58.3	58.2	58.1	58.0	57.9	57.9	58.0	58.1
31 - α Car	<i>Canopus</i>	-0.7	-52	42.6	42.8	42.8	42.8	42.7	42.6	42.4	42.3	42.2	42.2	42.3	42.5
32 - γ Gem	<i>Alhena</i>	1.9	+16	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.5
33 - α CMa	<i>Sirius</i>	-1.5	-16	45.2	45.3	45.3	45.3	45.3	45.2	45.1	45.0	44.9	45.0	45.0	45.2
34 - ϵ CMa	<i>Adhara</i>	1.5	-29	0.5	0.6	0.7	0.7	0.6	0.5	0.4	0.3	0.2	0.2	0.3	0.5
35 - δ CMa	<i>Wezen</i>	1.8	-26	26.1	26.2	26.3	26.3	26.3	26.2	26.1	25.9	25.9	25.9	26.0	26.1
36 - η CMa	<i>Aludra</i>	2.5	-29	21.3	21.4	21.5	21.5	21.5	21.4	21.2	21.1	21.0	21.0	21.1	21.3
37 - α Gem	<i>Castor</i>	1.6	+31	49.8	49.8	49.8	49.9	49.9	49.8	49.8	49.8	49.7	49.7	49.6	49.6
38 - α CMi	<i>Procyon</i>	0.4	+5	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.5	9.5	9.4	9.4	9.3
39 - β Gem	<i>Pollux</i>	1.1	+27	57.7	57.7	57.8	57.8	57.8	57.8	57.7	57.7	57.7	57.6	57.6	57.5
40 - ζ Pup	<i>Naos</i>	2.3	-40	4.6	4.7	4.8	4.9	4.9	4.8	4.7	4.5	4.4	4.4	4.5	4.6
41 - γ Vel	<i>Regor</i>	1.8	-47	24.8	24.9	25.1	25.1	25.1	25.0	24.9	24.7	24.6	24.6	24.7	24.8
42 - ϵ Car	<i>Avior</i>	1.9	-59	35.5	35.7	35.8	35.9	35.9	35.8	35.7	35.5	35.4	35.4	35.4	35.5
43 - δ Velorum		2.0	-54	48.2	48.4	48.5	48.6	48.6	48.6	48.4	48.3	48.1	48.1	48.1	48.3
44 - ζ Hydrae		3.1	+5	50.7	50.6	50.6	50.6	50.6	50.7	50.7	50.7	50.7	50.7	50.6	50.5
45 - λ Vel	<i>Suhail</i>	2.2	-43	32.2	32.4	32.5	32.6	32.6	32.6	32.5	32.3	32.2	32.2	32.2	32.3
46 - β Car	<i>Miaplacidus</i>	1.7	-69	49.3	49.5	49.7	49.8	49.8	49.8	49.7	49.5	49.4	49.3	49.3	49.4
47 - ι Car	<i>Aspidiske</i>	2.3	-59	22.9	23.1	23.3	23.4	23.5	23.4	23.3	23.2	23.0	22.9	23.0	23.1
48 - α Lyn	<i>Elvashak</i>	3.1	+34	16.8	16.8	16.9	16.9	16.9	16.9	16.9	16.8	16.7	16.6	16.6	16.5
49 - α Hyd	<i>Alphard</i>	2.0	-8	46.3	46.4	46.5	46.5	46.5	46.5	46.4	46.4	46.3	46.3	46.4	46.5
50 - α Leo	<i>Regulus</i>	1.4	+11	50.3	50.2	50.2	50.2	50.3	50.3	50.3	50.3	50.3	50.2	50.1	50.0

Nº	NOMBRE	Mag	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	
			°	'	'	'	'	'	'	'	'	'	'	'	
51 - μ Velorum		2.7	198	1.3	1.1	1.1	1.1	1.3	1.5	1.6	1.7	1.7	1.5	1.2	0.9
52 - ν Hydrae		3.1	197	16.0	15.9	15.8	15.9	15.9	16.0	16.1	16.1	16.1	15.9	15.7	15.5
53 - β UMa <i>Merak</i>		2.4	194	8.4	8.1	8.0	8.1	8.3	8.5	8.6	8.7	8.7	8.5	8.2	7.8
54 - α UMa <i>Dubhe</i>		1.8	193	39.5	39.2	39.1	39.2	39.4	39.7	39.9	40.0	40.0	39.8	39.4	39.0
55 - β Leo <i>Denebola</i>		2.1	182	23.9	23.7	23.6	23.6	23.7	23.7	23.8	23.8	23.9	23.8	23.6	23.4
56 - γ Crv <i>Gienah</i>		2.6	175	42.6	42.4	42.3	42.2	42.3	42.3	42.4	42.5	42.5	42.4	42.2	42.0
57 - α Cru <i>Acrux</i>		0.8	172	59.0	58.6	58.4	58.3	58.4	58.6	58.9	59.1	59.2	59.2	58.9	58.5
58 - γ Cru <i>Gacrux</i>		1.6	171	50.5	50.2	50.0	50.0	50.0	50.2	50.4	50.6	50.7	50.6	50.4	50.0
59 - γ Cen <i>Muhlifain</i>		2.2	169	15.4	15.1	15.0	14.9	14.9	15.0	15.2	15.3	15.4	15.4	15.2	14.9
60 - β Cru <i>Mimosa</i>		1.3	167	41.1	40.7	40.5	40.4	40.4	40.6	40.8	41.0	41.1	41.1	40.9	40.5
61 - ε UMa <i>Alioth</i>		1.8	166	12.1	11.8	11.6	11.5	11.6	11.7	11.9	12.1	12.3	12.3	12.1	11.8
62 - α^2 CVn <i>Cor Caroli</i>		2.9	165	41.1	40.8	40.7	40.6	40.6	40.7	40.9	41.0	41.0	41.0	40.9	40.7
63 - ε Vir <i>Vindemiatrix</i>		2.8	164	7.7	7.5	7.4	7.3	7.3	7.3	7.4	7.5	7.5	7.5	7.4	7.2
64 - ζ UMa <i>Mizar</i>		2.0	158	45.2	44.8	44.6	44.5	44.5	44.7	44.9	45.1	45.2	45.3	45.2	44.9
65 - α Vir <i>Spica</i>		1.0	158	21.4	21.1	21.0	20.9	20.9	20.9	21.0	21.0	21.1	21.1	21.0	20.8
66 - η UMa <i>Alkaid</i>		1.9	152	51.4	51.0	50.8	50.7	50.7	50.8	51.0	51.1	51.3	51.4	51.3	51.1
67 - β Cen <i>Hadad</i>		0.6	148	34.9	34.4	34.1	33.9	33.8	33.9	34.1	34.3	34.5	34.6	34.5	34.1
68 - θ Cen <i>Menkent</i>		2.1	147	56.7	56.4	56.2	56.0	56.0	56.0	56.0	56.2	56.3	56.3	56.2	56.0
69 - α Boo <i>Arcturus</i>		-0.1	145	47.2	46.9	46.8	46.6	46.6	46.6	46.7	46.8	46.9	46.9	46.9	46.7
70 - α^1 Cen <i>Rigel Kent.</i>		0.0	139	39.3	38.8	38.5	38.3	38.1	38.2	38.3	38.6	38.8	38.9	38.9	38.6
71 - α^2 Lib <i>Zubenelgenubi</i>		2.8	136	55.2	54.9	54.7	54.6	54.5	54.4	54.5	54.6	54.7	54.7	54.7	54.5
72 - β UMi <i>Kochab</i>		2.1	137	20.2	19.6	19.0	18.7	18.6	18.9	19.4	20.0	20.5	20.9	21.0	20.8
73 - β Lib <i>Zubeneschamali</i>		2.6	130	23.9	23.6	23.4	23.3	23.2	23.1	23.1	23.2	23.3	23.4	23.4	23.2
74 - α CrB <i>Alphecca</i>		2.2	126	3.2	2.9	2.7	2.5	2.4	2.4	2.5	2.6	2.7	2.8	2.8	2.7
75 - α Ser <i>Unukalhai</i>		2.6	123	36.8	36.6	36.3	36.2	36.0	36.0	36.0	36.1	36.2	36.3	36.3	36.2
76 - α Sco <i>Antares</i>		0.9	112	15.1	14.8	14.5	14.3	14.1	14.0	14.0	14.1	14.2	14.3	14.3	14.2
77 - α TrA <i>Atria</i>		1.9	107	9.0	8.4	7.8	7.2	6.8	6.6	6.6	6.8	7.2	7.6	7.7	7.6
78 - ε Scorpii		2.3	107	2.4	2.1	1.9	1.6	1.4	1.3	1.2	1.3	1.5	1.6	1.6	1.5
79 - η Oph <i>Sabik</i>		2.4	102	2.1	1.8	1.6	1.4	1.2	1.1	1.0	1.1	1.2	1.3	1.4	1.3
80 - α Her <i>Rasalgethi</i>		3.1	101	2.7	2.4	2.2	2.0	1.8	1.7	1.7	1.8	1.9	2.0	2.1	2.1
81 - λ Sco <i>Shaula</i>		1.6	96	9.6	9.3	9.0	8.7	8.5	8.3	8.3	8.3	8.5	8.6	8.7	8.6
82 - α Oph <i>Rasalhague</i>		2.1	95	58.1	57.8	57.6	57.4	57.2	57.1	57.1	57.1	57.2	57.4	57.4	57.4
83 - θ Sco <i>Sargas</i>		1.9	95	12.4	12.1	11.8	11.5	11.3	11.1	11.0	11.1	11.2	11.4	11.5	11.4
84 - γ Dra <i>Eltanin</i>		2.2	90	42.3	42.0	41.8	41.5	41.2	41.1	41.1	41.2	41.5	41.7	41.9	42.0
85 - ε Sgr <i>Kaus Australis</i>		1.8	83	31.8	31.5	31.3	31.0	30.8	30.5	30.4	30.5	30.6	30.7	30.8	30.8
86 - α Lyr <i>Vega</i>		0.0	80	33.1	32.9	32.7	32.4	32.2	32.0	31.9	32.0	32.2	32.4	32.5	32.6
87 - σ Sgr <i>Nunki</i>		2.1	75	47.1	46.9	46.7	46.4	46.2	45.9	45.8	45.8	45.9	46.0	46.1	46.1
88 - α Aql <i>Altair</i>		0.8	61	59.5	59.3	59.2	59.0	58.7	58.5	58.4	58.4	58.4	58.5	58.6	58.7
89 - γ Cyg <i>Sadr</i>		2.2	54	13.0	12.9	12.7	12.5	12.2	12.0	11.8	11.8	11.9	12.0	12.2	12.3
90 - α Pav <i>Peacock</i>		1.9	53	5.0	4.8	4.6	4.2	3.8	3.4	3.2	3.0	3.1	3.3	3.6	3.7
91 - α Cyg <i>Deneb</i>		1.3	49	25.7	25.6	25.5	25.2	24.9	24.7	24.5	24.4	24.5	24.7	24.9	25.0
92 - α Cep <i>Alderamin</i>		2.5	40	12.8	12.9	12.7	12.4	12.0	11.6	11.3	11.2	11.3	11.6	11.9	12.2
93 - ε Peg <i>Enif</i>		2.4	33	38.2	38.2	38.1	37.9	37.7	37.5	37.3	37.2	37.1	37.2	37.3	37.4
94 - δ Cap <i>Deneb Algedi</i>		2.8	32	53.0	53.0	52.9	52.7	52.5	52.2	52.0	51.9	51.9	51.9	52.0	52.1
95 - α Gru <i>Al Na'ir</i>		1.7	27	32.2	32.2	32.1	31.9	31.6	31.3	31.0	30.8	30.7	30.8	31.0	31.1
96 - β Gruis		2.1	18	56.9	57.0	56.9	56.7	56.4	56.1	55.8	55.6	55.5	55.6	55.7	55.9
97 - α PsA <i>Fomalhaut</i>		1.2	15	13.8	13.8	13.8	13.6	13.4	13.2	12.9	12.7	12.6	12.6	12.7	12.8
98 - β Peg <i>Scheat</i>		2.4	13	44.6	44.6	44.6	44.5	44.3	44.0	43.8	43.6	43.5	43.5	43.6	43.7
99 - α Peg <i>Markab</i>		2.5	13	29.3	29.3	29.2	29.1	28.9	28.7	28.4	28.3	28.2	28.2	28.3	28.4

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	'	'	'	'	'	'	'	'	'	'	'	'
51 - μ	Velorum	2.7	-49	33.3	33.5	33.7	33.8	33.9	33.9	33.8	33.7	33.6	33.5	33.5	33.6
52 - ν	Hydrae	3.1	-16	19.8	19.9	20.0	20.1	20.1	20.1	20.0	20.0	19.9	19.9	19.9	20.0
53 - β	UMa <i>Merak</i>	2.4	+56	14.3	14.3	14.4	14.6	14.6	14.7	14.6	14.5	14.3	14.2	14.0	13.9
54 - α	UMa <i>Dubhe</i>	1.8	+61	36.3	36.4	36.5	36.6	36.7	36.7	36.7	36.6	36.4	36.2	36.1	36.0
55 - β	Leo <i>Denebola</i>	2.1	+14	25.4	25.4	25.4	25.4	25.4	25.5	25.5	25.5	25.4	25.4	25.3	25.1
56 - γ	Crv <i>Gienah</i>	2.6	-17	41.2	41.3	41.4	41.5	41.5	41.5	41.5	41.4	41.4	41.3	41.4	41.4
57 - α	Cru <i>Acrux</i>	0.8	-63	14.4	14.5	14.7	14.9	15.0	15.1	15.1	15.0	14.9	14.8	14.7	14.7
58 - γ	Cru <i>Gacrux</i>	1.6	-57	15.3	15.5	15.6	15.8	15.9	16.0	16.0	15.9	15.8	15.7	15.6	15.6
59 - γ	Cen <i>Muhlifain</i>	2.2	-49	6.0	6.1	6.3	6.4	6.5	6.6	6.6	6.5	6.4	6.3	6.3	6.3
60 - β	Cru <i>Mimosa</i>	1.3	-59	49.6	49.8	49.9	50.1	50.2	50.3	50.3	50.3	50.2	50.0	49.9	49.9
61 - ε	UMa <i>Alioth</i>	1.8	+55	48.7	48.8	48.8	49.0	49.1	49.2	49.2	49.1	49.0	48.8	48.6	48.5
62 - α^2	CVn <i>Cor Caroli</i>	2.9	+38	10.4	10.3	10.4	10.5	10.6	10.7	10.7	10.7	10.6	10.4	10.3	10.1
63 - ε	Vir <i>Vindemiatrix</i>	2.8	+10	49.0	48.9	48.9	48.9	49.0	49.0	49.0	49.1	49.0	49.0	48.9	48.8
64 - ζ	UMa <i>Mizar</i>	2.0	+54	47.0	47.0	47.0	47.2	47.3	47.4	47.4	47.4	47.3	47.1	46.9	46.8
65 - α	Vir <i>Spica</i>	1.0	-11	17.9	18.0	18.0	18.1	18.1	18.1	18.1	18.0	18.0	18.0	18.0	18.1
66 - η	UMa <i>Alkaid</i>	1.9	+49	10.6	10.6	10.7	10.8	10.9	11.0	11.1	11.0	10.9	10.8	10.6	10.5
67 - β	Cen <i>Hadar</i>	0.6	-60	29.7	29.8	29.9	30.0	30.2	30.3	30.4	30.3	30.2	30.1	30.0	30.0
68 - θ	Cen <i>Menkent</i>	2.1	-36	29.8	29.9	30.0	30.1	30.2	30.2	30.2	30.2	30.1	30.1	30.0	30.0
69 - α	Boo <i>Arcturus</i>	-0.1	+19	2.6	2.5	2.5	2.5	2.6	2.7	2.8	2.8	2.7	2.7	2.5	2.4
70 - α^1	Cen <i>Rigil Kent.</i>	0.0	-60	56.3	56.4	56.5	56.7	56.8	56.9	57.0	57.0	56.9	56.8	56.7	56.6
71 - α^2	Lib <i>Zubenelgenubi</i>	2.8	-16	9.0	9.1	9.1	9.2	9.2	9.2	9.2	9.2	9.1	9.1	9.1	9.2
72 - β	UMi <i>Kochab</i>	2.1	+74	2.5	2.4	2.5	2.6	2.8	2.9	3.0	3.0	2.9	2.8	2.6	2.4
73 - β	Lib <i>Zubeneshamali</i>	2.6	-9	28.8	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.9	28.9
74 - α	CrB <i>Alphecca</i>	2.2	+26	37.4	37.3	37.3	37.3	37.4	37.6	37.6	37.7	37.7	37.6	37.5	37.3
75 - α	Ser <i>Unukalhai</i>	2.6	+6	20.5	20.4	20.4	20.4	20.4	20.5	20.6	20.6	20.6	20.6	20.5	20.4
76 - α	Sco <i>Antares</i>	0.9	-26	29.3	29.4	29.4	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.4	29.4
77 - α	TrA <i>Atria</i>	1.9	-69	4.2	4.2	4.2	4.3	4.4	4.5	4.7	4.7	4.7	4.7	4.6	4.4
78 - ε	Scorpii	2.3	-34	20.4	20.4	20.4	20.4	20.5	20.5	20.5	20.6	20.6	20.5	20.5	20.5
79 - η	Oph <i>Sabik</i>	2.4	-15	45.4	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.4	45.4	45.4	45.5
80 - α	Her <i>Rasalgethi</i>	3.1	+14	21.5	21.4	21.4	21.4	21.5	21.6	21.7	21.7	21.8	21.7	21.7	21.6
81 - λ	Sco <i>Shaula</i>	1.6	-37	7.3	7.3	7.3	7.3	7.3	7.4	7.4	7.4	7.5	7.4	7.4	7.4
82 - α	Oph <i>Rasalhague</i>	2.1	+12	32.3	32.3	32.2	32.2	32.3	32.4	32.5	32.6	32.6	32.6	32.5	32.4
83 - θ	Sco <i>Sargas</i>	1.9	-43	0.8	0.7	0.7	0.8	0.8	0.8	0.9	1.0	1.0	1.0	0.9	0.8
84 - γ	Dra <i>Eltanin</i>	2.2	+51	28.9	28.8	28.7	28.8	28.9	29.0	29.2	29.3	29.4	29.4	29.3	29.1
85 - ε	Sgr <i>Kaus Australis</i>	1.8	-34	22.3	22.3	22.3	22.2	22.2	22.3	22.3	22.3	22.4	22.3	22.3	22.3
86 - α	Lyr <i>Vega</i>	0.0	+38	48.3	48.2	48.1	48.1	48.2	48.4	48.6	48.7	48.8	48.8	48.7	48.6
87 - σ	Sgr <i>Nunki</i>	2.1	-26	15.9	15.9	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
88 - α	Aql <i>Altair</i>	0.8	+8	56.2	56.1	56.1	56.1	56.2	56.3	56.4	56.5	56.5	56.5	56.5	56.5
89 - γ	Cyg <i>Sadr</i>	2.2	+40	20.4	20.2	20.2	20.1	20.2	20.3	20.5	20.6	20.8	20.8	20.8	20.8
90 - α	Pav <i>Peacock</i>	1.9	-56	39.1	39.0	38.9	38.8	38.8	38.8	38.8	38.9	39.0	39.1	39.1	39.0
91 - α	Cyg <i>Deneb</i>	1.3	+45	22.4	22.3	22.2	22.1	22.2	22.3	22.5	22.6	22.8	22.9	22.9	22.8
92 - α	Cep <i>Alderamin</i>	2.5	+62	41.8	41.7	41.6	41.5	41.5	41.6	41.8	42.0	42.1	42.3	42.3	42.3
93 - ε	Peg <i>Enif</i>	2.4	+9	59.7	59.6	59.6	59.6	59.6	59.7	59.9	60.0	60.0	60.1	60.1	60.0
94 - δ	Cap <i>Deneb Algedi</i>	2.8	-16	0.6	0.6	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.3
95 - α	Gru <i>Al Na'ir</i>	1.7	-46	50.2	50.1	50.0	49.9	49.8	49.7	49.7	49.7	49.8	49.9	50.0	50.0
96 - β	Gruis	2.1	-46	45.1	45.0	44.9	44.7	44.6	44.5	44.5	44.5	44.6	44.7	44.8	44.8
97 - α	PsA <i>Fomalhaut</i>	1.2	-29	29.2	29.1	29.1	28.9	28.8	28.7	28.7	28.7	28.7	28.8	28.8	28.9
98 - β	Peg <i>Scheat</i>	2.4	+28	13.6	13.5	13.4	13.3	13.4	13.5	13.6	13.7	13.8	13.9	14.0	14.0
99 - α	Peg <i>Markab</i>	2.5	+15	20.8	20.7	20.7	20.7	20.7	20.8	20.9	21.0	21.1	21.2	21.2	21.2

Horas UT de paso por el meridiano origen el primer día de cada mes

Nº	NOMBRE	Mag	Ene	Feb	Mar	Abr	May	Jun	Jul
			h m	h m	h m	h m	h m	h m	h m
1 - α Andromedae	<i>Alpheratz</i>	2.1	17 24	15 22	13 32	11 30	9 32	7 31	5 33
2 - β Cassiopeae	<i>Caph</i>	2.3	17 25	15 23	13 33	11 31	9 33	7 31	5 33
6 - β Ceti	<i>Diphda</i>	2.0	17 59	15 57	14 07	12 05	10 07	8 06	6 08
9 - α Eridani	<i>Achernar</i>	0.5	18 53	16 51	15 01	12 59	11 01	8 59	7 01
12 - α Arietis	<i>Hamal</i>	2.0	19 23	17 21	15 31	13 29	11 31	9 29	7 31
13 - θ Eridani	<i>Acamar</i>	2.9	20 13	18 11	16 21	14 19	12 21	10 20	8 22
16 - α Persei	<i>Mirfak</i>	1.8	20 40	18 38	16 48	14 46	12 48	10 46	8 49
19 - α Tauri	<i>Aldebaran</i>	0.9	21 51	19 49	17 59	15 57	13 59	11 57	10 00
20 - β Orionis	<i>Rigel</i>	0.1	22 29	20 28	18 37	16 36	14 38	12 36	10 38
21 - α Aurigae	<i>Capella</i>	0.1	22 32	20 30	18 40	16 38	14 40	12 39	10 41
22 - γ Orionis	<i>Bellatrix</i>	1.6	22 40	20 38	18 48	16 46	14 48	12 46	10 49
28 - α Orionis	<i>Betelgeuse</i>	0.4	23 10	21 08	19 18	17 16	15 18	13 16	11 18
31 - α Carinae	<i>Canopus</i>	-0.7	23 38	21 36	19 46	17 44	15 46	13 44	11 46
33 - α Canis Majoris	<i>Sirius</i>	-1.5	0 04	21 58	20 08	18 06	16 08	14 06	12 08
34 - ϵ Canis Majoris	<i>Adhara</i>	1.5	0 17	22 11	20 21	18 19	16 21	14 19	12 21
38 - α Canis Minoris	<i>Procyon</i>	0.4	0 58	22 52	21 02	19 00	17 02	15 00	13 02
39 - β Geminorum	<i>Pollux</i>	1.1	1 04	22 58	21 08	19 06	17 08	15 06	13 09
42 - ϵ Carinae	<i>Avior</i>	1.9	1 40	23 34	21 44	19 42	17 44	15 42	13 44
45 - λ Velorum	<i>Suhail</i>	2.2	2 26	0 24	22 30	20 28	18 30	16 28	14 30
46 - β Carinae	<i>Miaplacidus</i>	1.7	2 30	0 29	22 35	20 33	18 35	16 33	14 35
49 - α Hydrae	<i>Alphard</i>	2.0	2 46	0 44	22 50	20 48	18 50	16 48	14 50
50 - α Leonis	<i>Regulus</i>	1.4	3 27	1 25	23 31	21 29	19 31	17 29	15 31
54 - α Ursae Majoris	<i>Dubhe</i>	1.8	4 22	2 20	0 30	22 24	20 26	18 24	16 26
55 - β Leonis	<i>Denebola</i>	2.1	5 07	3 05	1 15	23 09	21 11	19 09	17 11
57 - α Crucis	<i>Acrux</i>	0.8	5 44	3 43	1 53	23 47	21 49	19 47	17 49
58 - γ Crucis	<i>Gacrux</i>	1.6	5 49	3 47	1 57	23 51	21 53	19 51	17 53
60 - β Crucis	<i>Mimosa</i>	1.3	6 06	4 04	2 14	0 12	22 10	20 08	18 10
61 - ϵ Ursae Majoris	<i>Alioth</i>	1.8	6 12	4 10	2 20	0 18	22 16	20 14	18 16
64 - ζ Ursae Majoris	<i>Mizar</i>	2.0	6 41	4 39	2 49	0 47	22 46	20 44	18 46
65 - α Virginis	<i>Spica</i>	1.0	6 43	4 41	2 51	0 49	22 47	20 45	18 47
68 - θ Centauri	<i>Menkent</i>	2.1	7 24	5 22	3 32	1 31	23 29	21 27	19 29
69 - α Bootis	<i>Arcturus</i>	-0.1	7 33	5 31	3 41	1 39	23 37	21 35	19 37
70 - α^1 Centauri	<i>Rigel Kent.</i>	0.0	7 57	5 56	4 05	2 04	0 06	22 00	20 02
72 - β Ursae Minoris	<i>Kochab</i>	2.1	8 07	6 05	4 15	2 13	0 15	22 09	20 11
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	8 52	6 50	5 00	2 58	1 00	22 54	20 56
76 - α Scorpii	<i>Antares</i>	0.9	9 47	7 45	5 55	3 53	1 55	23 49	21 51
77 - α Trianguli Aust.	<i>Atria</i>	1.9	10 07	8 05	6 15	4 13	2 15	0 14	22 12
81 - λ Scorpii	<i>Shaula</i>	1.6	10 51	8 49	6 59	4 57	2 59	0 57	22 55
82 - α Ophiuchi	<i>Rasalhague</i>	2.1	10 52	8 50	7 00	4 58	3 00	0 58	22 56
84 - γ Draconis	<i>Eltanin</i>	2.2	11 13	9 11	7 21	5 19	3 21	1 19	23 17
85 - ϵ Sagittarii	<i>Kaus Australis</i>	1.8	11 41	9 39	7 49	5 47	3 50	1 48	23 46
86 - α Lyrae	<i>Vega</i>	0.0	11 53	9 51	8 01	5 59	4 01	2 00	0 02
87 - σ Sagittarii	<i>Nunki</i>	2.1	12 12	10 10	8 20	6 18	4 20	2 19	0 21
88 - α Aquilae	<i>Altair</i>	0.8	13 07	11 05	9 15	7 13	5 15	3 14	1 16
90 - α Pavonis	<i>Peacock</i>	1.9	13 43	11 41	9 51	7 49	5 51	3 49	1 51
91 - α Cygni	<i>Deneb</i>	1.3	13 57	11 55	10 05	8 04	6 06	4 04	2 06
93 - ϵ Pegasi	<i>Enif</i>	2.4	15 00	12 58	11 08	9 06	7 09	5 07	3 09
95 - α Gruis	<i>Al Na'ir</i>	1.7	15 25	13 23	11 33	9 31	7 33	5 31	3 33
97 - α Piscis Austrini	<i>Fomalhaut</i>	1.2	16 14	14 12	12 22	10 20	8 22	6 20	4 22
99 - α Pegasi	<i>Markab</i>	2.5	16 21	14 19	12 29	10 27	8 29	6 27	4 29

Horas UT de paso por el meridiano origen el primer día de cada mes

Nº	NOMBRE	Mag	Ago	Sep	Oct	Nov	Dic	1ª CORRECCIÓN																																																																		
			h m	h m	h m	h m	h m	Se restará para obtener la hora del paso en otro día del mismo mes.																																																																		
1 - α Andromedae	<i>Alpheratz</i>	2.1	3 31	1 29	23 27	21 25	19 27	<table><tr><th>Día</th><th>Corr.</th></tr><tr><td></td><td>h m</td></tr><tr><td>1</td><td>0 00</td></tr><tr><td>2</td><td>0 04</td></tr><tr><td>3</td><td>0 08</td></tr><tr><td>4</td><td>0 12</td></tr><tr><td>5</td><td>0 16</td></tr><tr><td>6</td><td>0 20</td></tr><tr><td>7</td><td>0 24</td></tr><tr><td>8</td><td>0 28</td></tr><tr><td>9</td><td>0 31</td></tr><tr><td>10</td><td>0 35</td></tr><tr><td>11</td><td>0 39</td></tr><tr><td>12</td><td>0 43</td></tr><tr><td>13</td><td>0 47</td></tr><tr><td>14</td><td>0 51</td></tr><tr><td>15</td><td>0 55</td></tr><tr><td>16</td><td>0 59</td></tr><tr><td>17</td><td>1 03</td></tr><tr><td>18</td><td>1 07</td></tr><tr><td>19</td><td>1 11</td></tr><tr><td>20</td><td>1 15</td></tr><tr><td>21</td><td>1 19</td></tr><tr><td>22</td><td>1 23</td></tr><tr><td>23</td><td>1 27</td></tr><tr><td>24</td><td>1 30</td></tr><tr><td>25</td><td>1 34</td></tr><tr><td>26</td><td>1 38</td></tr><tr><td>27</td><td>1 42</td></tr><tr><td>28</td><td>1 46</td></tr><tr><td>29</td><td>1 50</td></tr><tr><td>30</td><td>1 54</td></tr><tr><td>31</td><td>1 58</td></tr></table>	Día	Corr.		h m	1	0 00	2	0 04	3	0 08	4	0 12	5	0 16	6	0 20	7	0 24	8	0 28	9	0 31	10	0 35	11	0 39	12	0 43	13	0 47	14	0 51	15	0 55	16	0 59	17	1 03	18	1 07	19	1 11	20	1 15	21	1 19	22	1 23	23	1 27	24	1 30	25	1 34	26	1 38	27	1 42	28	1 46	29	1 50	30	1 54	31	1 58
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2 - β Cassiopeae	<i>Caph</i>	2.3	3 32	1 30	23 28	21 26	19 28																																																																			
6 - β Ceti	<i>Diphda</i>	2.0	4 06	2 04	0 06	22 00	20 02																																																																			
9 - α Eridani	<i>Achernar</i>	0.5	4 59	2 58	1 00	22 54	20 56																																																																			
12 - α Arietis	<i>Hamal</i>	2.0	5 29	3 27	1 29	23 24	21 26																																																																			
13 - θ Eridani	<i>Acamar</i>	2.9	6 20	4 18	2 20	0 18	22 16																																																																			
16 - α Persei	<i>Mirfak</i>	1.8	6 47	4 45	2 47	0 45	22 43																																																																			
19 - α Tauri	<i>Aldebaran</i>	0.9	7 58	5 56	3 58	1 56	23 54																																																																			
20 - β Orionis	<i>Rigel</i>	0.1	8 36	6 34	4 36	2 34	0 36																																																																			
21 - α Aurigae	<i>Capella</i>	0.1	8 39	6 37	4 39	2 37	0 39																																																																			
22 - γ Orionis	<i>Bellatrix</i>	1.6	8 47	6 45	4 47	2 45	0 47																																																																			
28 - α Orionis	<i>Betelgeuse</i>	0.4	9 17	7 15	5 17	3 15	1 17																																																																			
31 - α Carinae	<i>Canopus</i>	-0.7	9 44	7 43	5 45	3 43	1 45																																																																			
33 - α Canis Majoris	<i>Sirius</i>	-1.5	10 06	8 04	6 06	4 04	2 07																																																																			
34 - ϵ Canis Majoris	<i>Adhara</i>	1.5	10 19	8 18	6 20	4 18	2 20																																																																			
38 - α Canis Minoris	<i>Procyon</i>	0.4	11 00	8 59	7 01	4 59	3 01																																																																			
39 - β Geminorum	<i>Pollux</i>	1.1	11 07	9 05	7 07	5 05	3 07																																																																			
42 - ϵ Carinae	<i>Avior</i>	1.9	11 43	9 41	7 43	5 41	3 43																																																																			
45 - λ Velorum	<i>Suhail</i>	2.2	12 28	10 27	8 29	6 27	4 29																																																																			
46 - β Carinae	<i>Miaplacidus</i>	1.7	12 33	10 31	8 33	6 31	4 33																																																																			
49 - α Hydrae	<i>Alphard</i>	2.0	12 48	10 46	8 48	6 47	4 49																																																																			
50 - α Leonis	<i>Regulus</i>	1.4	13 29	11 27	9 29	7 27	5 29																																																																			
54 - α Ursae Majoris	<i>Dubhe</i>	1.8	14 24	12 23	10 25	8 23	6 25																																																																			
55 - β Leonis	<i>Denebola</i>	2.1	15 09	13 08	11 10	9 08	7 10																																																																			
57 - α Crucis	<i>Acrux</i>	0.8	15 47	13 45	11 47	9 45	7 47																																																																			
58 - γ Crucis	<i>Gacrux</i>	1.6	15 52	13 50	11 52	9 50	7 52																																																																			
60 - β Crucis	<i>Mimosa</i>	1.3	16 08	14 06	12 08	10 06	8 08																																																																			
61 - ϵ Ursae Majoris	<i>Alioth</i>	1.8	16 14	14 12	12 14	10 12	8 14																																																																			
64 - ζ Ursae Majoris	<i>Mizar</i>	2.0	16 44	14 42	12 44	10 42	8 44																																																																			
65 - α Virginis	<i>Spica</i>	1.0	16 45	14 43	12 46	10 44	8 46																																																																			
68 - θ Centauri	<i>Menkent</i>	2.1	17 27	15 25	13 27	11 25	9 27																																																																			
69 - α Bootis	<i>Arcturus</i>	-0.1	17 36	15 34	13 36	11 34	9 36																																																																			
70 - α^1 Centauri	<i>Rigil Kent.</i>	0.0	18 00	15 58	14 00	11 58	10 00																																																																			
72 - β Ursae Minoris	<i>Kochab</i>	2.1	18 09	16 07	14 09	12 07	10 09																																																																			
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	18 54	16 52	14 54	12 52	10 55																																																																			
76 - α Scorpii	<i>Antares</i>	0.9	19 49	17 47	15 49	13 48	11 50																																																																			
77 - α Trianguli Aust.	<i>Atria</i>	1.9	20 10	18 08	16 10	14 08	12 10																																																																			
81 - λ Scorpii	<i>Shaula</i>	1.6	20 54	18 52	16 54	14 52	12 54																																																																			
82 - α Ophiuchi	<i>Rasalhague</i>	2.1	20 54	18 52	16 54	14 53	12 55																																																																			
84 - γ Draconis	<i>Eltanin</i>	2.2	21 15	19 13	17 15	15 14	13 16																																																																			
85 - ϵ Sagittarii	<i>Kaus Australis</i>	1.8	21 44	19 42	17 44	15 42	13 44																																																																			
86 - α Lyrae	<i>Vega</i>	0.0	21 56	19 54	17 56	15 54	13 56																																																																			
87 - σ Sagittarii	<i>Nunki</i>	2.1	22 15	20 13	18 15	16 13	14 15																																																																			
88 - α Aquilae	<i>Altair</i>	0.8	23 10	21 08	19 10	17 08	15 10																																																																			
90 - α Pavonis	<i>Peacock</i>	1.9	23 45	21 44	19 46	17 44	15 46																																																																			
91 - α Cygni	<i>Deneb</i>	1.3	0 04	21 58	20 00	17 58	16 00																																																																			
93 - ϵ Pegasi	<i>Enif</i>	2.4	1 07	23 01	21 03	19 01	17 03																																																																			
95 - α Gruis	<i>Al Na'ir</i>	1.7	1 31	23 25	21 27	19 26	17 28																																																																			
97 - α Piscis Austrini	<i>Fomalhaut</i>	1.2	2 20	0 18	22 17	20 15	18 17																																																																			
99 - α Pegasi	<i>Markab</i>	2.5	2 27	0 25	22 23	20 22	18 24																																																																			

TABLA I

h.L. $\cap$ Corr.	h.L. $\cap$ Corr.	h.L. $\cap$ Corr.	h.L. $\cap$ Corr.	h.L. $\cap$ Corr.	h.L. $\cap$ Corr.	h.L. $\cap$ Corr.	h.L. $\cap$ Corr.
$\circ$ / /	$\circ$ / /	$\circ$ / /	$\circ$ / /	$\circ$ / /	$\circ$ / /	$\circ$ / /	$\circ$ / /
0 00 -25.7	26 00 -35.0	52 00 -37.3	78 00 -32.0	104 00 -20.2	130 00 - 4.3	156 00 +12.4	
0 30 -26.0	26 30 -35.2	52 30 -37.2	78 30 -31.8	104 30 -19.9	130 30 - 4.0	156 30 +12.7	
1 00 -26.2	27 00 -35.3	53 00 -37.2	79 00 -31.6	105 00 -19.6	131 00 - 3.7	157 00 +13.0	
1 30 -26.4	27 30 -35.4	53 30 -37.2	79 30 -31.4	105 30 -19.4	131 30 - 3.3	157 30 +13.3	
2 00 -26.7	28 00 -35.5	54 00 -37.1	80 00 -31.3	106 00 -19.1	132 00 - 3.0	158 00 +13.6	
2 30 -26.9	28 30 -35.6	54 30 -37.1	80 30 -31.1	106 30 -18.8	132 30 - 2.7	158 30 +14.0	
3 00 -27.1	29 00 -35.7	55 00 -37.0	81 00 -30.9	107 00 -18.5	133 00 - 2.4	159 00 +14.3	
3 30 -27.3	29 30 -35.8	55 30 -37.0	81 30 -30.7	107 30 -18.2	133 30 - 2.0	159 30 +14.6	
4 00 -27.6	30 00 -35.9	56 00 -36.9	82 00 -30.5	108 00 -17.9	134 00 - 1.7	160 00 +14.9	
4 30 -27.8	30 30 -36.0	56 30 -36.9	82 30 -30.3	108 30 -17.7	134 30 - 1.4	160 30 +15.2	
5 00 -28.0	31 00 -36.1	57 00 -36.8	83 00 -30.1	109 00 -17.4	135 00 - 1.1	161 00 +15.5	
5 30 -28.2	31 30 -36.1	57 30 -36.8	83 30 -30.0	109 30 -17.1	135 30 - 0.7	161 30 +15.8	
6 00 -28.4	32 00 -36.2	58 00 -36.7	84 00 -29.8	110 00 -16.8	136 00 - 0.4	162 00 +16.0	
6 30 -28.6	32 30 -36.3	58 30 -36.6	84 30 -29.6	110 30 -16.5	136 30 - 0.1	162 30 +16.3	
7 00 -28.8	33 00 -36.4	59 00 -36.6	85 00 -29.4	111 00 -16.2	137 00 + 0.2	163 00 +16.6	
7 30 -29.0	33 30 -36.5	59 30 -36.5	85 30 -29.2	111 30 -15.9	137 30 + 0.6	163 30 +16.9	
8 00 -29.3	34 00 -36.5	60 00 -36.4	86 00 -28.9	112 00 -15.6	138 00 + 0.9	164 00 +17.2	
8 30 -29.5	34 30 -36.6	60 30 -36.4	86 30 -28.7	112 30 -15.3	138 30 + 1.2	164 30 +17.5	
9 00 -29.7	35 00 -36.7	61 00 -36.3	87 00 -28.5	113 00 -15.0	139 00 + 1.6	165 00 +17.8	
9 30 -29.9	35 30 -36.7	61 30 -36.2	87 30 -28.3	113 30 -14.7	139 30 + 1.9	165 30 +18.1	
10 00 -30.1	36 00 -36.8	62 00 -36.1	88 00 -28.1	114 00 -14.4	140 00 + 2.2	166 00 +18.4	
10 30 -30.2	36 30 -36.9	62 30 -36.0	88 30 -27.9	114 30 -14.1	140 30 + 2.5	166 30 +18.7	
11 00 -30.4	37 00 -36.9	63 00 -35.9	89 00 -27.7	115 00 -13.8	141 00 + 2.9	167 00 +18.9	
11 30 -30.6	37 30 -37.0	63 30 -35.8	89 30 -27.4	115 30 -13.5	141 30 + 3.2	167 30 +19.2	
12 00 -30.8	38 00 -37.0	64 00 -35.7	90 00 -27.2	116 00 -13.2	142 00 + 3.5	168 00 +19.5	
12 30 -31.0	38 30 -37.1	64 30 -35.6	90 30 -27.0	116 30 -12.9	142 30 + 3.8	168 30 +19.8	
13 00 -31.2	39 00 -37.1	65 00 -35.5	91 00 -26.8	117 00 -12.6	143 00 + 4.2	169 00 +20.1	
13 30 -31.4	39 30 -37.2	65 30 -35.4	91 30 -26.5	117 30 -12.3	143 30 + 4.5	169 30 +20.3	
14 00 -31.5	40 00 -37.2	66 00 -35.3	92 00 -26.3	118 00 -12.0	144 00 + 4.8	170 00 +20.6	
14 30 -31.7	40 30 -37.2	66 30 -35.2	92 30 -26.1	118 30 -11.6	144 30 + 5.1	170 30 +20.9	
15 00 -31.9	41 00 -37.3	67 00 -35.1	93 00 -25.8	119 00 -11.3	145 00 + 5.5	171 00 +21.1	
15 30 -32.1	41 30 -37.3	67 30 -35.0	93 30 -25.6	119 30 -11.0	145 30 + 5.8	171 30 +21.4	
16 00 -32.2	42 00 -37.3	68 00 -34.9	94 00 -25.4	120 00 -10.7	146 00 + 6.1	172 00 +21.7	
16 30 -32.4	42 30 -37.3	68 30 -34.7	94 30 -25.1	120 30 -10.4	146 30 + 6.4	172 30 +21.9	
17 00 -32.6	43 00 -37.4	69 00 -34.6	95 00 -24.9	121 00 -10.1	147 00 + 6.7	173 00 +22.2	
17 30 -32.7	43 30 -37.4	69 30 -34.5	95 30 -24.6	121 30 - 9.8	147 30 + 7.1	173 30 +22.5	
18 00 -32.9	44 00 -37.4	70 00 -34.4	96 00 -24.4	122 00 - 9.5	148 00 + 7.4	174 00 +22.7	
18 30 -33.0	44 30 -37.4	70 30 -34.2	96 30 -24.1	122 30 - 9.1	148 30 + 7.7	174 30 +23.0	
19 00 -33.2	45 00 -37.4	71 00 -34.1	97 00 -23.9	123 00 - 8.8	149 00 + 8.0	175 00 +23.2	
19 30 -33.3	45 30 -37.4	71 30 -34.0	97 30 -23.6	123 30 - 8.5	149 30 + 8.3	175 30 +23.5	
20 00 -33.5	46 00 -37.4	72 00 -33.8	98 00 -23.4	124 00 - 8.2	150 00 + 8.7	176 00 +23.8	
20 30 -33.6	46 30 -37.4	72 30 -33.7	98 30 -23.1	124 30 - 7.9	150 30 + 9.0	176 30 +24.0	
21 00 -33.8	47 00 -37.4	73 00 -33.5	99 00 -22.9	125 00 - 7.5	151 00 + 9.3	177 00 +24.3	
21 30 -33.9	47 30 -37.4	73 30 -33.4	99 30 -22.6	125 30 - 7.2	151 30 + 9.6	177 30 +24.5	
22 00 -34.0	48 00 -37.4	74 00 -33.3	100 00 -22.3	126 00 - 6.9	152 00 + 9.9	178 00 +24.8	
22 30 -34.2	48 30 -37.4	74 30 -33.1	100 30 -22.1	126 30 - 6.6	152 30 +10.2	178 30 +25.0	
23 00 -34.3	49 00 -37.4	75 00 -32.9	101 00 -21.8	127 00 - 6.3	153 00 +10.6	179 00 +25.2	
23 30 -34.4	49 30 -37.4	75 30 -32.8	101 30 -21.5	127 30 - 5.9	153 30 +10.9	179 30 +25.5	
24 00 -34.6	50 00 -37.4	76 00 -32.6	102 00 -21.3	128 00 - 5.6	154 00 +11.2	180 00 +25.7	
24 30 -34.7	50 30 -37.4	76 30 -32.5	102 30 -21.0	128 30 - 5.3	154 30 +11.5	180 30 +26.0	
25 00 -34.8	51 00 -37.3	77 00 -32.3	103 00 -20.7	129 00 - 5.0	155 00 +11.8	181 00 +26.2	
25 30 -34.9	51 30 -37.3	77 30 -32.1	103 30 -20.5	129 30 - 4.6	155 30 +12.1	181 30 +26.4	
26 00 -35.0	52 00 -37.3	78 00 -32.0	104 00 -20.2	130 00 - 4.3	156 00 +12.4	182 00 +26.7	

TABLA I

h.L. $\cap$ Corr.	h.L. $\cap$ Corr.	h.L. $\cap$ Corr.	h.L. $\cap$ Corr.	h.L. $\cap$ Corr.	h.L. $\cap$ Corr.	h.L. $\cap$ Corr.	h.L. $\cap$ Corr.
$\circ$ /	$\circ$ /	$\circ$ /	$\circ$ /	$\circ$ /	$\circ$ /	$\circ$ /	$\circ$ /
182 00 +26.7	208 00 +35.5	234 00 +37.1	260 00 +31.3	286 00 +19.1	312 00 + 3.0	338 00 -13.6	
182 30 +26.9	208 30 +35.6	234 30 +37.1	260 30 +31.1	286 30 +18.8	312 30 + 2.7	338 30 -14.0	
183 00 +27.1	209 00 +35.7	235 00 +37.0	261 00 +30.9	287 00 +18.5	313 00 + 2.4	339 00 -14.3	
183 30 +27.3	209 30 +35.8	235 30 +37.0	261 30 +30.7	287 30 +18.2	313 30 + 2.0	339 30 -14.6	
184 00 +27.6	210 00 +35.9	236 00 +36.9	262 00 +30.5	288 00 +17.9	314 00 + 1.7	340 00 -14.9	
184 30 +27.8	210 30 +36.0	236 30 +36.9	262 30 +30.3	288 30 +17.7	314 30 + 1.4	340 30 -15.2	
185 00 +28.0	211 00 +36.1	237 00 +36.8	263 00 +30.1	289 00 +17.4	315 00 + 1.1	341 00 -15.5	
185 30 +28.2	211 30 +36.1	237 30 +36.8	263 30 +30.0	289 30 +17.1	315 30 + 0.7	341 30 -15.8	
186 00 +28.4	212 00 +36.2	238 00 +36.7	264 00 +29.8	290 00 +16.8	316 00 + 0.4	342 00 -16.0	
186 30 +28.6	212 30 +36.3	238 30 +36.6	264 30 +29.6	290 30 +16.5	316 30 + 0.1	342 30 -16.3	
187 00 +28.8	213 00 +36.4	239 00 +36.6	265 00 +29.4	291 00 +16.2	317 00 - 0.2	343 00 -16.6	
187 30 +29.0	213 30 +36.5	239 30 +36.5	265 30 +29.2	291 30 +15.9	317 30 - 0.6	343 30 -16.9	
188 00 +29.3	214 00 +36.5	240 00 +36.4	266 00 +28.9	292 00 +15.6	318 00 - 0.9	344 00 -17.2	
188 30 +29.5	214 30 +36.6	240 30 +36.4	266 30 +28.7	292 30 +15.3	318 30 - 1.2	344 30 -17.5	
189 00 +29.7	215 00 +36.7	241 00 +36.3	267 00 +28.5	293 00 +15.0	319 00 - 1.6	345 00 -17.8	
189 30 +29.9	215 30 +36.7	241 30 +36.2	267 30 +28.3	293 30 +14.7	319 30 - 1.9	345 30 -18.1	
190 00 +30.1	216 00 +36.8	242 00 +36.1	268 00 +28.1	294 00 +14.4	320 00 - 2.2	346 00 -18.4	
190 30 +30.2	216 30 +36.9	242 30 +36.0	268 30 +27.9	294 30 +14.1	320 30 - 2.5	346 30 -18.7	
191 00 +30.4	217 00 +36.9	243 00 +35.9	269 00 +27.7	295 00 +13.8	321 00 - 2.9	347 00 -18.9	
191 30 +30.6	217 30 +37.0	243 30 +35.8	269 30 +27.4	295 30 +13.5	321 30 - 3.2	347 30 -19.2	
192 00 +30.8	218 00 +37.0	244 00 +35.7	270 00 +27.2	296 00 +13.2	322 00 - 3.5	348 00 -19.5	
192 30 +31.0	218 30 +37.1	244 30 +35.6	270 30 +27.0	296 30 +12.9	322 30 - 3.8	348 30 -19.8	
193 00 +31.2	219 00 +37.1	245 00 +35.5	271 00 +26.8	297 00 +12.6	323 00 - 4.2	349 00 -20.1	
193 30 +31.4	219 30 +37.2	245 30 +35.4	271 30 +26.5	297 30 +12.3	323 30 - 4.5	349 30 -20.3	
194 00 +31.5	220 00 +37.2	246 00 +35.3	272 00 +26.3	298 00 +12.0	324 00 - 4.8	350 00 -20.6	
194 30 +31.7	220 30 +37.2	246 30 +35.2	272 30 +26.1	298 30 +11.6	324 30 - 5.1	350 30 -20.9	
195 00 +31.9	221 00 +37.3	247 00 +35.1	273 00 +25.8	299 00 +11.3	325 00 - 5.5	351 00 -21.1	
195 30 +32.1	221 30 +37.3	247 30 +35.0	273 30 +25.6	299 30 +11.0	325 30 - 5.8	351 30 -21.4	
196 00 +32.2	222 00 +37.3	248 00 +34.9	274 00 +25.4	300 00 +10.7	326 00 - 6.1	352 00 -21.7	
196 30 +32.4	222 30 +37.3	248 30 +34.7	274 30 +25.1	300 30 +10.4	326 30 - 6.4	352 30 -21.9	
197 00 +32.6	223 00 +37.4	249 00 +34.6	275 00 +24.9	301 00 +10.1	327 00 - 6.7	353 00 -22.2	
197 30 +32.7	223 30 +37.4	249 30 +34.5	275 30 +24.6	301 30 + 9.8	327 30 - 7.1	353 30 -22.5	
198 00 +32.9	224 00 +37.4	250 00 +34.4	276 00 +24.4	302 00 + 9.5	328 00 - 7.4	354 00 -22.7	
198 30 +33.0	224 30 +37.4	250 30 +34.2	276 30 +24.1	302 30 + 9.1	328 30 - 7.7	354 30 -23.0	
199 00 +33.2	225 00 +37.4	251 00 +34.1	277 00 +23.9	303 00 + 8.8	329 00 - 8.0	355 00 -23.2	
199 30 +33.3	225 30 +37.4	251 30 +34.0	277 30 +23.6	303 30 + 8.5	329 30 - 8.3	355 30 -23.5	
200 00 +33.5	226 00 +37.4	252 00 +33.8	278 00 +23.4	304 00 + 8.2	330 00 - 8.7	356 00 -23.8	
200 30 +33.6	226 30 +37.4	252 30 +33.7	278 30 +23.1	304 30 + 7.9	330 30 - 9.0	356 30 -24.0	
201 00 +33.8	227 00 +37.4	253 00 +33.5	279 00 +22.9	305 00 + 7.5	331 00 - 9.3	357 00 -24.3	
201 30 +33.9	227 30 +37.4	253 30 +33.4	279 30 +22.6	305 30 + 7.2	331 30 - 9.6	357 30 -24.5	
202 00 +34.0	228 00 +37.4	254 00 +33.3	280 00 +22.3	306 00 + 6.9	332 00 - 9.9	358 00 -24.8	
202 30 +34.2	228 30 +37.4	254 30 +33.1	280 30 +22.1	306 30 + 6.6	332 30 -10.2	358 30 -25.0	
203 00 +34.3	229 00 +37.4	255 00 +32.9	281 00 +21.8	307 00 + 6.3	333 00 -10.6	359 00 -25.2	
203 30 +34.4	229 30 +37.4	255 30 +32.8	281 30 +21.5	307 30 + 5.9	333 30 -10.9	359 30 -25.5	
204 00 +34.6	230 00 +37.4	256 00 +32.6	282 00 +21.3	308 00 + 5.6	334 00 -11.2	360 00 -25.7	
204 30 +34.7	230 30 +37.4	256 30 +32.5	282 30 +21.0	308 30 + 5.3	334 30 -11.5		
205 00 +34.8	231 00 +37.3	257 00 +32.3	283 00 +20.7	309 00 + 5.0	335 00 -11.8		
205 30 +34.9	231 30 +37.3	257 30 +32.1	283 30 +20.5	309 30 + 4.6	335 30 -12.1		
206 00 +35.0	232 00 +37.3	258 00 +32.0	284 00 +20.2	310 00 + 4.3	336 00 -12.4		
206 30 +35.2	232 30 +37.2	258 30 +31.8	284 30 +19.9	310 30 + 4.0	336 30 -12.7		
207 00 +35.3	233 00 +37.2	259 00 +31.6	285 00 +19.6	311 00 + 3.7	337 00 -13.0		
207 30 +35.4	233 30 +37.2	259 30 +31.4	285 30 +19.4	311 30 + 3.3	337 30 -13.3		
208 00 +35.5	234 00 +37.1	260 00 +31.3	286 00 +19.1	312 00 + 3.0	338 00 -13.6		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2026

TABLA II
(SIEMPRE POSITIVA)

hL [°]	ALTURA											
	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°
0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
100	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3
120	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
140	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.4
160	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4
180	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
200	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
280	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3
300	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
320	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.4
340	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4
360	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2

TABLA III

hL [°]	Ene 1	Feb 1	Mar 1	Abr 1	May 1	Jun 1	Jul 1	Ago 1	Sep 1	Oct 1	Nov 1	Dic 1	Dic 32
0	+0.1	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.2	-0.1	+0.1	+0.3	+0.4	+0.5
20	+0.1	+0.2	+0.1	-0.1	-0.2	-0.3	-0.4	-0.3	-0.2	0.0	+0.2	+0.4	+0.5
40	+0.1	+0.2	+0.2	+0.1	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	+0.1	+0.3	+0.4
60	+0.1	+0.2	+0.3	+0.2	+0.1	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	+0.1	+0.3
80	+0.1	+0.2	+0.3	+0.3	+0.2	0.0	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	+0.1
100	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	-0.1
120	0.0	+0.1	+0.3	+0.4	+0.4	+0.3	+0.1	-0.1	-0.2	-0.3	-0.4	-0.3	-0.2
140	-0.1	+0.1	+0.2	+0.3	+0.4	+0.4	+0.2	+0.1	-0.1	-0.3	-0.4	-0.4	-0.4
160	-0.1	0.0	+0.1	+0.3	+0.4	+0.4	+0.3	+0.2	0.0	-0.2	-0.4	-0.5	-0.5
180	-0.1	-0.1	0.0	+0.2	+0.3	+0.4	+0.4	+0.2	+0.1	-0.1	-0.3	-0.4	-0.5
200	-0.1	-0.2	-0.1	+0.1	+0.2	+0.3	+0.4	+0.3	+0.2	0.0	-0.2	-0.4	-0.5
220	-0.1	-0.2	-0.2	-0.1	+0.1	+0.2	+0.3	+0.3	+0.2	+0.1	-0.1	-0.3	-0.4
240	-0.1	-0.2	-0.3	-0.2	-0.1	+0.1	+0.2	+0.3	+0.3	+0.2	+0.1	-0.1	-0.3
260	-0.1	-0.2	-0.3	-0.3	-0.2	0.0	+0.1	+0.2	+0.3	+0.3	+0.2	+0.1	-0.1
280	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	+0.1
300	0.0	-0.1	-0.3	-0.4	-0.4	-0.3	-0.1	+0.1	+0.2	+0.3	+0.4	+0.3	+0.2
320	+0.1	-0.1	-0.2	-0.3	-0.4	-0.4	-0.2	-0.1	+0.1	+0.3	+0.4	+0.4	+0.4
340	+0.1	0.0	-0.1	-0.3	-0.4	-0.4	-0.3	-0.2	0.0	+0.2	+0.4	+0.5	+0.5
360	+0.1	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.2	-0.1	+0.1	+0.3	+0.4	+0.5

Dic 32 corresponde al 1 de enero del año siguiente

hL [°]	Latitud												hL [°]
	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	
0	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.9	+1.1	0
10	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.5	+0.6	+0.7	+0.8	+0.9	10
20	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.4	+0.5	+0.6	+0.7	20
30	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	+0.4	+0.4	30
40	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.2	40
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	50
60	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	60
70	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.6	70
80	-0.3	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.6	-0.7	-0.8	80
90	-0.4	-0.4	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.7	-0.8	-0.9	-1.0	90
100	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.9	-1.0	-1.2	100
110	-0.6	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.9	-1.0	-1.1	-1.3	110
120	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.2	-1.4	120
130	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.5	130
140	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.5	140
150	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.9	-0.9	-1.1	-1.2	-1.4	150
160	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.9	-1.0	-1.1	-1.3	160
170	-0.5	-0.5	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.9	-1.0	-1.2	170
180	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.7	-0.8	-0.9	-1.1	180
190	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.6	-0.6	-0.7	-0.9	190
200	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.6	-0.6	200
210	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.4	-0.4	210
220	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	220
230	0.0	0.0	0.0	0.0	0.0	0.0	0.0	+0.1	+0.1	+0.1	+0.1	+0.1	230
240	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	240
250	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	+0.6	250
260	+0.3	+0.4	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.6	+0.7	+0.8	260
270	+0.4	+0.4	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.7	+0.7	+0.8	+1.0	270
280	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.9	+1.0	+1.2	280
290	+0.6	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.9	+1.0	+1.1	+1.3	290
300	+0.6	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.2	+1.4	300
310	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.5	310
320	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.5	320
330	+0.6	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.9	+0.9	+1.1	+1.2	+1.4	330
340	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.2	+1.4	340
350	+0.5	+0.5	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.9	+1.1	+1.2	350
360	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.9	+1.1	360

Cuando el signo es +, la Polar está al E del meridiano.
 Cuando el signo es -, la Polar está al W del meridiano.

Long	Retardo diario																	
	5 ^m	10 ^m	15 ^m	20 ^m	25 ^m	30 ^m	35 ^m	40 ^m	45 ^m	50 ^m	55 ^m	60 ^m	65 ^m	70 ^m	75 ^m	80 ^m	85 ^m	90 ^m
°	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
10	0	0	0	1	1	1	1	1	1	1	2	2	2	2	2	2	2	3
15	0	0	1	1	1	1	1	2	2	2	2	3	3	3	3	3	4	4
20	0	1	1	1	1	2	2	2	3	3	3	3	4	4	4	4	5	5
25	0	1	1	1	2	2	2	3	3	3	4	4	5	5	5	6	6	6
30	0	1	1	2	2	3	3	3	4	4	5	5	5	6	6	7	7	8
35	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
40	1	1	2	2	3	3	4	4	5	6	6	7	7	8	8	9	9	10
45	1	1	2	3	3	4	4	5	6	6	7	8	8	9	9	10	11	11
50	1	1	2	3	3	4	5	6	6	7	8	8	9	10	10	11	12	13
55	1	2	2	3	4	5	5	6	7	8	8	9	10	11	11	12	13	14
60	1	2	3	3	4	5	6	7	8	8	9	10	11	12	13	13	14	15
65	1	2	3	4	5	5	6	7	8	9	10	11	12	13	14	14	15	16
70	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
75	1	2	3	4	5	6	7	8	9	10	11	13	14	15	16	17	18	19
80	1	2	3	4	6	7	8	9	10	11	12	13	14	16	17	18	19	20
85	1	2	4	5	6	7	8	9	11	12	13	14	15	17	18	19	20	21
90	1	3	4	5	6	8	9	10	11	13	14	15	16	18	19	20	21	23
95	1	3	4	5	7	8	9	11	12	13	15	16	17	18	20	21	22	24
100	1	3	4	6	7	8	10	11	13	14	15	17	18	19	21	22	24	25
105	1	3	4	6	7	9	10	12	13	15	16	18	19	20	22	23	25	26
110	2	3	5	6	8	9	11	12	14	15	17	18	20	21	23	24	26	28
115	2	3	5	6	8	10	11	13	14	16	18	19	21	22	24	26	27	29
120	2	3	5	7	8	10	12	13	15	17	18	20	22	23	25	27	28	30
125	2	3	5	7	9	10	12	14	16	17	19	21	23	24	26	28	30	31
130	2	4	5	7	9	11	13	14	16	18	20	22	23	25	27	29	31	33
135	2	4	6	8	9	11	13	15	17	19	21	23	24	26	28	30	32	34
140	2	4	6	8	10	12	14	16	18	19	21	23	25	27	29	31	33	35
145	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
150	2	4	6	8	10	13	15	17	19	21	23	25	27	29	31	33	35	38
155	2	4	6	9	11	13	15	17	19	22	24	26	28	30	32	34	37	39
160	2	4	7	9	11	13	16	18	20	22	24	27	29	31	33	36	38	40
165	2	5	7	9	11	14	16	18	21	23	25	28	30	32	34	37	39	41
170	2	5	7	9	12	14	17	19	21	24	26	28	31	33	35	38	40	43
175	2	5	7	10	12	15	17	19	22	24	27	29	32	34	36	39	41	44
180	3	5	8	10	13	15	18	20	23	25	28	30	33	35	38	40	43	45

**CORRECCIONES PARA OBTENER LA ALTURA VERDADERA
DEL SOL (LIMBO INFERIOR), PLANETA O ESTRELLA, 2026**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)									
DEPRESIÓN DEL HORIZONTE				SEMIDIÁMETRO, REFRACCIÓN Y PARALAJE								Correc. adicional 2026	
Elevación observador	Corrección	Elevación observador	Corrección	Altura apte.	Corrección	Altura apte.	Corrección	Altura apte.	Corrección	Altura apte.	Corrección		
m	'	m	'	°	'	°	'	°	'	°	'		
1.6	-2.3	12.7	-6.4	6 15	+8.2	8 45	+10.2	13 23	+12.2	25 59	+14.2	Ene 1	+0'3
1.7	-2.4	13.1	-6.5	6 21	+8.3	8 54	+10.3	13 44	+12.3	27 12	+14.3	Ene 30	+0'2
1.9	-2.5	13.6	-6.6	6 27	+8.4	9 05	+10.4	14 06	+12.4	28 32	+14.4	Mar 7	+0'1
2.0	-2.6	14.0	-6.7	6 33	+8.5	9 15	+10.5	14 29	+12.5	29 59	+14.5	Mar 30	0'0
2.2	-2.7	14.4	-6.8	6 40	+8.6	9 26	+10.6	14 53	+12.6	31 34	+14.6	Abr 21	-0'1
2.3	-2.8	14.8	-6.9	6 53	+8.7	9 47	+10.7	15 45	+12.7	35 16	+14.7	May 15	-0'2
2.5	-2.9	15.3	-7.0	7 00	+8.8	10 00	+10.8	16 13	+12.8	37 25	+14.8	Jun 20	-0'3
2.7	-3.0	15.7	-7.1	7 06	+8.9	10 12	+10.9	16 43	+12.9	39 49	+14.9	Ago 4	-0'2
2.9	-3.1	16.2	-7.2	7 14	+9.0	10 25	+11.0	17 14	+13.0	42 30	+15.0	Sep 9	-0'1
3.1	-3.2	16.6	-7.3	7 21	+9.1	10 38	+11.1	17 47	+13.1	45 30	+15.1	Oct 3	0'0
3.3	-3.3	17.1	-7.4	7 28	+9.2	10 52	+11.2	18 23	+13.2	48 53	+15.2	Oct 26	+0'1
3.5	-3.4	17.6	-7.5	7 36	+9.3	11 06	+11.3	19 01	+13.3	52 43	+15.3	Nov 18	+0'2
3.7	-3.5	18.0	-7.6	7 44	+9.4	11 21	+11.4	19 41	+13.4	57 01	+15.4	Dic 24	+0'3
3.9	-3.6	18.5	-7.7	7 52	+9.5	11 36	+11.5	20 24	+13.5	61 51	+15.5	Dic 31	
4.2	-3.7	19.0	-7.8	8 00	+9.6	11 52	+11.6	21 10	+13.6	67 16	+15.6		
4.4	-3.8	19.5	-7.9	8 08	+9.7	12 09	+11.7	21 59	+13.7	73 14	+15.7		
4.7	-3.9	20.0	-8.0	8 17	+9.8	12 26	+11.8	22 53	+13.8	79 42	+15.8		
4.9	-4.0	20.5	-8.1	8 26	+9.9	12 44	+11.9	23 50	+13.9	86 30	+15.9		
5.2	-4.1	21.0	-8.2	8 35	+10.0	13 03	+12.0	24 52	+14.0	90 00	+16.0		
5.4	-4.2	21.5	-8.3	8 45	+10.1	13 23	+12.1	25 59	+14.1				
5.7	-4.3	22.1	-8.4	TABLA C = PLANETAS Y ESTRELLAS									
6.0	-4.4	22.6	-8.5	REFRACCIÓN					PARALAJE (2026)				
6.2	-4.5	23.1	-8.6	Altura apte.	Corrección	Altura apte.	Corrección	Fechas	Venus para cualquier altura	Marte			
6.5	-4.6	23.7	-8.7							Altura aparente			
6.8	-4.7	24.2	-8.8	°	'	°	'			< 30°	> 30° < 60°	> 60°	
7.1	-4.8	24.8	-8.9	6 30	-7.8	14 00	-3.8	Ene 1	+0'1	+0'1	0'0	0'0	
7.4	-4.9	25.4	-9.0	6 40	-7.6	15 00	-3.6	Jul 11	+0'1	+0'1	+0'1	0'0	
7.7	-5.0	25.9	-9.1	6 50	-7.5	16 00	-3.3	Jul 21	+0'1	+0'1	+0'1	0'0	
8.0	-5.1	26.5	-9.2	7 00	-7.3	17 00	-3.1	Jul 21	+0'2	+0'1	+0'1	0'0	
8.4	-5.2	27.1	-9.3	7 15	-7.1	18 00	-3.0	Sep 4	+0'2	+0'1	+0'1	0'0	
8.7	-5.3	27.7	-9.4	7 30	-6.9	19 00	-2.8	Sep 25	+0'3	+0'1	+0'1	0'0	
9.0	-5.4	28.3	-9.5	7 45	-6.7	20 00	-2.6	Sep 25	+0'4	+0'1	+0'1	0'0	
9.4	-5.5	28.9	-9.6	8 00	-6.5	21 00	-2.5	Oct 12	+0'5	+0'1	+0'1	0'0	
9.7	-5.6	29.5	-9.7	8 15	-6.3	22 00	-2.4	Nov 6	+0'4	+0'1	+0'1	0'0	
10.1	-5.7	30.1	-9.8	8 30	-6.2	24 00	-2.2	Nov 23	+0'3	+0'1	+0'1	0'0	
10.4	-5.8	30.7	-9.9	8 45	-6.0	26 00	-2.0	Dic 15	+0'2	+0'1	+0'1	0'0	
10.8	-5.9	31.3	-10.0	9 00	-5.9	28 00	-1.8	Dic 21	+0'2	+0'1	+0'1	+0'1	
11.2	-6.0	32.0	-10.1	9 20	-5.7	32 00	-1.6	Dic 31	+0'2	+0'1	+0'1		
11.6	-6.1	32.6	-10.2	9 40	-5.5	36 00	-1.3						
11.9	-6.2	33.3	-10.3	10 00	-5.3	40 00	-1.2						
12.3	-6.3	33.9	-10.4	10 30	-5.1	45 00	-1.0						
12.7		34.6		11 00	-4.8	50 00	-0.8						
				11 30	-4.6	60 00	-0.6						
				12 00	-4.5	70 00	-0.4						
				12 30	-4.3	80 00	-0.2						
				13 00	-4.1	90 00	0.0						

La altura aparente es la observada corregida por depresión del horizonte.
En estas tablas, para los valores explícitos tomar el valor superior.

**CORRECCIÓN POR REFRACCIÓN, PARALAJE Y SEMIDIÁMETRO
A APLICAR A LA ALTURA APARENTE DE LA LUNA**

Altura ap. °	LIMBO INFERIOR Paralaje Horizontal								Altura ap. °	LIMBO SUPERIOR Paralaje Horizontal							
	54'	55'	56'	57'	58'	59'	60'	61'		54'	55'	56'	57'	58'	59'	60'	61'
10	62.6	63.9	65.1	66.4	67.7	68.9	70.2	71.4	10	33.1	33.8	34.5	35.2	36.0	36.7	37.4	38.1
11	62.9	64.2	65.4	66.7	67.9	69.2	70.4	71.7	11	33.4	34.1	34.8	35.5	36.2	36.9	37.7	38.4
12	63.1	64.4	65.6	66.9	68.1	69.4	70.6	71.9	12	33.6	34.3	35.0	35.7	36.4	37.1	37.8	38.5
13	63.3	64.5	65.7	67.0	68.2	69.5	70.7	72.0	13	33.7	34.4	35.1	35.8	36.5	37.2	37.9	38.6
14	63.3	64.6	65.8	67.1	68.3	69.5	70.8	72.0	14	33.8	34.5	35.2	35.9	36.6	37.3	38.0	38.7
15	63.3	64.6	65.8	67.1	68.3	69.5	70.8	72.0	15	33.8	34.5	35.2	35.9	36.6	37.3	38.0	38.7
16	63.3	64.6	65.8	67.0	68.3	69.5	70.7	72.0	16	33.8	34.5	35.2	35.9	36.6	37.2	37.9	38.6
17	63.3	64.5	65.7	66.9	68.2	69.4	70.6	71.9	17	33.7	34.4	35.1	35.8	36.5	37.2	37.8	38.5
18	63.2	64.4	65.6	66.8	68.1	69.3	70.5	71.7	18	33.6	34.3	35.0	35.7	36.4	37.0	37.7	38.4
19	63.0	64.2	65.5	66.7	67.9	69.1	70.3	71.5	19	33.5	34.2	34.9	35.5	36.2	36.9	37.5	38.2
20	62.9	64.1	65.3	66.5	67.7	68.9	70.1	71.3	20	33.3	34.0	34.7	35.3	36.0	36.7	37.3	38.0
21	62.7	63.9	65.1	66.3	67.5	68.7	69.9	71.1	21	33.1	33.8	34.5	35.1	35.8	36.4	37.1	37.8
22	62.4	63.6	64.8	66.0	67.2	68.4	69.6	70.8	22	32.9	33.6	34.2	34.9	35.5	36.2	36.8	37.5
23	62.2	63.4	64.6	65.8	67.0	68.2	69.4	70.5	23	32.7	33.3	34.0	34.6	35.3	35.9	36.6	37.2
24	61.9	63.1	64.3	65.5	66.7	67.9	69.0	70.2	24	32.4	33.0	33.7	34.3	35.0	35.6	36.2	36.9
25	61.6	62.8	64.0	65.2	66.3	67.5	68.7	69.9	25	32.1	32.7	33.4	34.0	34.6	35.3	35.9	36.5
26	61.3	62.5	63.7	64.8	66.0	67.2	68.3	69.5	26	31.8	32.4	33.0	33.7	34.3	34.9	35.5	36.2
27	61.0	62.1	63.3	64.5	65.6	66.8	68.0	69.1	27	31.5	32.1	32.7	33.3	33.9	34.5	35.2	35.8
28	60.6	61.8	62.9	64.1	65.2	66.4	67.6	68.7	28	31.1	31.7	32.3	32.9	33.5	34.2	34.8	35.4
29	60.2	61.4	62.5	63.7	64.8	66.0	67.1	68.3	29	30.7	31.3	31.9	32.5	33.1	33.7	34.3	34.9
30	59.8	61.0	62.1	63.3	64.4	65.5	66.7	67.8	30	30.3	30.9	31.5	32.1	32.7	33.3	33.9	34.5
31	59.4	60.6	61.7	62.8	64.0	65.1	66.2	67.3	31	29.9	30.5	31.1	31.7	32.3	32.8	33.4	34.0
32	59.0	60.1	61.2	62.4	63.5	64.6	65.7	66.8	32	29.5	30.1	30.6	31.2	31.8	32.4	32.9	33.5
33	58.6	59.7	60.8	61.9	63.0	64.1	65.2	66.3	33	29.0	29.6	30.2	30.7	31.3	31.9	32.4	33.0
34	58.1	59.2	60.3	61.4	62.5	63.6	64.7	65.8	34	28.6	29.1	29.7	30.2	30.8	31.4	31.9	32.5
35	57.6	58.7	59.8	60.9	62.0	63.1	64.2	65.3	35	28.1	28.6	29.2	29.7	30.3	30.8	31.4	31.9
36	57.1	58.2	59.3	60.4	61.4	62.5	63.6	64.7	36	27.6	28.1	28.7	29.2	29.7	30.3	30.8	31.3
37	56.6	57.7	58.7	59.8	60.9	62.0	63.0	64.1	37	27.1	27.6	28.1	28.7	29.2	29.7	30.2	30.8
38	56.1	57.1	58.2	59.3	60.3	61.4	62.4	63.5	38	26.6	27.1	27.6	28.1	28.6	29.1	29.6	30.2
39	55.5	56.6	57.6	58.7	59.7	60.8	61.8	62.9	39	26.0	26.5	27.0	27.5	28.0	28.5	29.0	29.5
40	55.0	56.0	57.0	58.1	59.1	60.2	61.2	62.2	40	25.5	25.9	26.4	26.9	27.4	27.9	28.4	28.9
41	54.4	55.4	56.4	57.5	58.5	59.5	60.6	61.6	41	24.9	25.4	25.8	26.3	26.8	27.3	27.8	28.3
42	53.8	54.8	55.8	56.9	57.9	58.9	59.9	60.9	42	24.3	24.8	25.2	25.7	26.2	26.6	27.1	27.6
43	53.2	54.2	55.2	56.2	57.2	58.2	59.2	60.2	43	23.7	24.2	24.6	25.1	25.5	26.0	26.4	26.9
44	52.6	53.6	54.6	55.6	56.6	57.6	58.6	59.5	44	23.1	23.5	24.0	24.4	24.9	25.3	25.8	26.2
45	52.0	52.9	53.9	54.9	55.9	56.9	57.9	58.8	45	22.5	22.9	23.3	23.8	24.2	24.6	25.1	25.5
46	51.3	52.3	53.3	54.2	55.2	56.2	57.1	58.1	46	21.8	22.2	22.7	23.1	23.5	23.9	24.3	24.8
47	50.7	51.6	52.6	53.5	54.5	55.5	56.4	57.4	47	21.2	21.6	22.0	22.4	22.8	23.2	23.6	24.0
48	50.0	51.0	51.9	52.8	53.8	54.7	55.7	56.6	48	20.5	20.9	21.3	21.7	22.1	22.5	22.9	23.3
49	49.3	50.3	51.2	52.1	53.1	54.0	54.9	55.8	49	19.8	20.2	20.6	21.0	21.4	21.7	22.1	22.5
50	48.7	49.6	50.5	51.4	52.3	53.2	54.1	55.1	50	19.1	19.5	19.9	20.2	20.6	21.0	21.4	21.7
51	48.0	48.9	49.8	50.7	51.6	52.5	53.4	54.3	51	18.4	18.8	19.2	19.5	19.9	20.2	20.6	20.9
52	47.2	48.1	49.0	49.9	50.8	51.7	52.6	53.5	52	17.7	18.1	18.4	18.8	19.1	19.4	19.8	20.1
53	46.5	47.4	48.3	49.1	50.0	50.9	51.8	52.6	53	17.0	17.3	17.7	18.0	18.3	18.7	19.0	19.3
54	45.8	46.7	47.5	48.4	49.2	50.1	51.0	51.8	54	16.3	16.6	16.9	17.2	17.5	17.9	18.2	18.5
55	45.0	45.9	46.7	47.6	48.4	49.3	50.1	51.0	55	15.5	15.8	16.1	16.4	16.7	17.0	17.3	17.6

**CORRECCIÓN POR REFRACCIÓN, PARALAJE Y SEMIDIÁMETRO
A APLICAR A LA ALTURA APARENTE DE LA LUNA**

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Altura ap. °	LIMBO INFERIOR Paralaje Horizontal								Altura ap. °	LIMBO SUPERIOR Paralaje Horizontal							
	54'	55'	56'	57'	58'	59'	60'	61'		54'	55'	56'	57'	58'	59'	60'	61'
55	45.0	45.9	46.7	47.6	48.4	49.3	50.1	51.0	55	15.5	15.8	16.1	16.4	16.7	17.0	17.3	17.6
56	44.3	45.1	46.0	46.8	47.6	48.5	49.3	50.1	56	14.8	15.1	15.4	15.6	15.9	16.2	16.5	16.8
57	43.5	44.4	45.2	46.0	46.8	47.6	48.4	49.3	57	14.0	14.3	14.6	14.8	15.1	15.4	15.7	15.9
58	42.8	43.6	44.4	45.2	46.0	46.8	47.6	48.4	58	13.3	13.5	13.8	14.0	14.3	14.5	14.8	15.0
59	42.0	42.8	43.6	44.3	45.1	45.9	46.7	47.5	59	12.5	12.7	13.0	13.2	13.4	13.7	13.9	14.2
60	41.2	42.0	42.7	43.5	44.3	45.1	45.8	46.6	60	11.7	11.9	12.1	12.4	12.6	12.8	13.0	13.3
61	40.4	41.2	41.9	42.7	43.4	44.2	44.9	45.7	61	10.9	11.1	11.3	11.5	11.7	11.9	12.2	12.4
62	39.6	40.3	41.1	41.8	42.6	43.3	44.0	44.8	62	10.1	10.3	10.5	10.7	10.9	11.1	11.3	11.5
63	38.8	39.5	40.2	41.0	41.7	42.4	43.1	43.9	63	9.3	9.4	9.6	9.8	10.0	10.2	10.3	10.5
64	38.0	38.7	39.4	40.1	40.8	41.5	42.2	42.9	64	8.4	8.6	8.8	8.9	9.1	9.3	9.4	9.6
65	37.1	37.8	38.5	39.2	39.9	40.6	41.3	42.0	65	7.6	7.8	7.9	8.1	8.2	8.4	8.5	8.7
66	36.3	37.0	37.6	38.3	39.0	39.7	40.4	41.0	66	6.8	6.9	7.0	7.2	7.3	7.4	7.6	7.7
67	35.4	36.1	36.8	37.4	38.1	38.8	39.4	40.1	67	5.9	6.0	6.2	6.3	6.4	6.5	6.6	6.8
68	34.6	35.2	35.9	36.5	37.2	37.8	38.5	39.1	68	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8
69	33.7	34.4	35.0	35.6	36.3	36.9	37.5	38.2	69	4.2	4.3	4.4	4.5	4.6	4.6	4.7	4.8
70	32.9	33.5	34.1	34.7	35.3	35.9	36.6	37.2	70	3.4	3.4	3.5	3.6	3.6	3.7	3.8	3.8
71	32.0	32.6	33.2	33.8	34.4	35.0	35.6	36.2	71	2.5	2.5	2.6	2.6	2.7	2.8	2.8	2.9
72	31.1	31.7	32.3	32.9	33.5	34.0	34.6	35.2	72	1.6	1.7	1.7	1.7	1.8	1.8	1.8	1.9
73	30.2	30.8	31.4	31.9	32.5	33.1	33.6	34.2	73	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.9
74	29.4	29.9	30.5	31.0	31.6	32.1	32.7	33.2	74	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
75	28.5	29.0	29.5	30.1	30.6	31.1	31.7	32.2	75	-1.0	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1
76	27.6	28.1	28.6	29.1	29.6	30.2	30.7	31.2	76	-1.9	-2.0	-2.0	-2.0	-2.1	-2.1	-2.1	-2.2
77	26.7	27.2	27.7	28.2	28.7	29.2	29.7	30.2	77	-2.8	-2.9	-2.9	-3.0	-3.0	-3.1	-3.1	-3.2
78	25.8	26.3	26.7	27.2	27.7	28.2	28.7	29.1	78	-3.7	-3.8	-3.9	-3.9	-4.0	-4.1	-4.1	-4.2
79	24.9	25.3	25.8	26.3	26.7	27.2	27.7	28.1	79	-4.6	-4.7	-4.8	-4.9	-5.0	-5.1	-5.1	-5.2
80	24.0	24.4	24.9	25.3	25.7	26.2	26.6	27.1	80	-5.6	-5.6	-5.7	-5.8	-5.9	-6.0	-6.1	-6.2

La altura aparente es la observada corregida por depresión del horizonte con los datos de la tabla A de la página 387.

PARTES PROPORCIONALES

Variación tabular por grado de altura															Minutos de paralaje	
(corrección sustractiva, excepto para alturas <15°, que es aditiva)																
	0'0	0'1	0'2	0'3	0'4	0'5	0'6	0'7	0'8	0'9	1'0	1'1	1'2	1'3		
Minutos de altura	00'	0'0	0'0	0'0	0'0	0'0	0'0	0'0	0'0	0'0	0'0	0'0	0'0	0'0		0'0
	06'	0'0	0'0	0'0	0'0	0'0	0'1	0'1	0'1	0'1	0'1	0'1	0'1	0'1		0'1
	12'	0'0	0'0	0'0	0'1	0'1	0'1	0'1	0'1	0'2	0'2	0'2	0'2	0'2		0'3
	18'	0'0	0'0	0'1	0'1	0'1	0'2	0'2	0'2	0'2	0'3	0'3	0'3	0'4		0'4
	24'	0'0	0'0	0'1	0'1	0'2	0'2	0'2	0'3	0'3	0'4	0'4	0'4	0'5		0'5
	30'	0'0	0'1	0'1	0'2	0'2	0'3	0'3	0'4	0'4	0'5	0'5	0'6	0'6		0'7
	36'	0'0	0'1	0'1	0'2	0'2	0'3	0'4	0'4	0'5	0'5	0'6	0'7	0'7		0'8
	42'	0'0	0'1	0'1	0'2	0'3	0'4	0'4	0'5	0'6	0'6	0'7	0'8	0'8	0'9	
	48'	0'0	0'1	0'2	0'2	0'3	0'4	0'5	0'6	0'6	0'7	0'8	0'9	1'0	1'0	
54'	0'0	0'1	0'2	0'3	0'4	0'5	0'5	0'6	0'7	0'8	0'9	1'0	1'1	1'2	0'9	
60'	0'0	0'1	0'2	0'3	0'4	0'5	0'6	0'7	0'8	0'9	1'0	1'1	1'2	1'3	1'0	
Variación tabular por minuto de paralaje																
(corrección aditiva)																